

COMPREHENSIVE GRAMMAR RESOURCES

Henk van Riemsdijk & István Kenesei, series editors

# Syntax of *Dutch*

*Nouns and  
Noun Phrases*

VOLUME 2

Hans Broekhuis  
Marcel den Dikken

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Nouns and Noun Phrases  
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Henk van Riemsdijk

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# **Syntax of Dutch**

## **Nouns and Noun Phrases**

### **Volume 2**

Hans Broekhuis  
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# Abbreviations and symbols

This appendix contains a list of abbreviations and symbols that are used in this volume. Sometimes conventions are adopted that differ from the ones given in this list, but if this is the case this is always explicitly mentioned in the text.

°xxx	Refers to the XXX in the glossary
A+section #	A3.2 refers to Section 3.2. in Hans Broekhuis (to appear). <i>Grammar of Dutch: Adjectives and adjective Phrases.</i>
Domain D	Domain of discourse
P+section #	P3.2 refers to Section 3.2. in Hans Broekhuis (to appear). <i>Grammar of Dutch: Adpositions and adpositional phrases.</i>
QC	Quantificational binominal construction
V+section #	V3.2 refers to Section 3.2. in Hans Broekhuis & Norbert Corver (in prep). <i>Grammar of Dutch: Verbs and verb phrases.</i>

## Abbreviations used in both the main text and the examples

AP	Adjectival Phrase	PP	Prepositional Phrase
DP	Determiner Phrase	QP	Quantifier Phrase
NP	Noun Phrase*	VP	Verb Phrase
NumP	Numeral Phrase		

\*) *Noun phrase* is written in full when the NP-DP distinction is not relevant.

## Symbols, abbreviations and conventions used in the examples

<i>e</i>	Phonetically empty element
Ref	Referent argument (external °thematic role of nouns/adjectives)
Rel	Related argument (internal °thematic role of relational nouns)
OP	Empty operator
PG	Parasitic gap
PRO	Implied subject in, e.g., infinitival clauses
PRO <sub>arb</sub>	Implied subject PRO with arbitrary (generic) reference
<i>t</i>	Trace (the original position of a moved element)
XXX	Small caps indicates that XXX is assigned contrastive accent

## Abbreviations used as subscripts in the examples

1p/2p/3p	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> person	nom	nominative
acc	accusative	pl	plural
dat	dative	poss	possessor
dim	diminutive	pred	predicate
fem	feminine	rec	recipient
masc	masculine	sg	singular



## Abbreviations used in the glosses of the examples

AFF	Affirmative marker
COMP	Complementizer: <i>dat</i> ‘that’ in finite declarative clauses, <i>of</i> ‘whether/if’ in finite interrogative clauses, and <i>om</i> in infinitival clauses
prt.	Particle that combines with a particle verb
PRT	Particle of different kinds
REFL	The short form of the reflexive pronoun, e.g., <i>zich</i> ; the long form <i>zichzelf</i> is usually translated as <i>himself/herself/itself</i>
XXX	Small caps in other cases indicates that XXX cannot be translated

## Diacritics used for indicating acceptability judgments

*	Unacceptable
*?	Relatively acceptable compared to *
??	Intermediate or unclear status
?	Marked: not completely acceptable or disfavored form
(?)	Slightly marked, but probably acceptable
no marking	Fully acceptable
%	Not (fully) acceptable due to non-syntactic factors <i>or</i> varying judgments among speakers
#	Unacceptable under intended reading
\$	Special status: old-fashioned, archaic, very formal, incoherent, etc.

## Other conventions

xx/yy	Acceptable both with xx and with yy
*xx/yy	Unacceptable with xx, but acceptable with yy
xx/*yy	Acceptable with xx, but unacceptable with yy
(xx)	Acceptable both with and without xx
*(xx)	Acceptable with, but unacceptable without xx
(*xx)	Acceptable without, but unacceptable with xx
.. <xx>	Alternative placement of xx in an example
.. <*xx> ..	Impossible placement of xx in an example
⇒	Necessarily implies
⇏	Does not necessarily imply
<i>XX ... YY</i>	Italics indicate binding
XX <sub>i</sub> ... YY <sub>i</sub>	Coindexing indicates coreference
XX <sub>i</sub> ... YY <sub>j</sub>	Counter-indexing indicates disjoint reference
XX <sub>*i/j</sub>	Unacceptable with index <i>i</i> , acceptable with index <i>j</i>
XX <sub>i/*j</sub>	Unacceptable with index <i>j</i> , acceptable with index <i>i</i>
[XP ... ]	Constituent brackets of a constituent XP

## Chapter 4

### Projection of noun phrases III: binominal constructions

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## Introduction

This chapter will discuss nominal °projections that contain two nouns without it being obvious which of the two nouns is to be considered the head of the construction. Section 4.1 will discuss noun phrases of the type *een paar boeken* ‘a couple of books’, in which two nouns may occur adjacently, without an intervening preposition. Section 4.2 will discuss binominal constructions that do require the presence of a preposition, such as the *N of a N* construction *een schat van een kind* ‘a treasure of a child’, in which the preposition *van* obligatorily intervenes between the two noun phrases.

### 4.1. Binominal constructions without a preposition

This section discusses binominal constructions in which the two nouns may or must occur adjacently, that is, without a preposition connecting the two. Section 4.1.1 will discuss constructions like *een paar boeken* ‘a couple of books’, in which the first noun quantifies the latter. Section 4.1.2 continues with the apparently similar non-quantificational construction *een soort boek* ‘a kind of book’. Section 4.1.3 concludes with an overview of several other types of binominal constructions.

#### 4.1.1. Quantificational constructions: *een paar boeken* ‘a couple of books’

This section discusses quantificational binominal constructions, that is, noun phrases in which the quantificational part of the noun phrase is expressed by means of another noun phrase. An example is given in (1a). The first noun phrase *een paar* ‘a couple’ expresses the quantity of the set of objects denoted by the second noun phrase *voorbeelden* ‘examples’. In other words, the string *een paar* is comparable to the cardinal numeral *twee* ‘two’ or the quantifier *enkele* ‘some’ in (1b). Since English features the preposition *of* in the renderings of examples like (1a), we will include this preposition in the glosses within square brackets for convenience.

- (1) a. *een paar        voorbeelden*  
       a couple [of] examples  
       ‘a couple of examples’  
    b. *twee/enkele voorbeelden*  
       two/some    examples

The quantificational binominal construction in (1a), which will henceforth be referred to as QC, is remarkable in that the two noun phrases seem to be juxtaposed: unlike in English, no preposition, such as *van* ‘of’, is used. For convenience, we will distinguish the two nouns by appealing to linear order: the first noun in a QC will be referred to as  $N_1$  and the second one as  $N_2$ . Thus, in example (1a) the noun *paar* is an  $N_1$ , and *voorbeelden* is an  $N_2$ .

This section is organized as follows. Section 4.1.1.1 starts by giving a brief characterization of the types of  $N_1$  and  $N_2$  that can be used. Section 4.1.1.2 continues by showing that there exist at least three types of QC, depending on whether  $N_1$  or  $N_2$  acts as the syntactic/semantic head of the construction. Sections 4.1.1.3 and 4.1.1.4 will go more deeply into the properties of  $N_1$  and  $N_2$ , respectively. Subsequently, Section 4.1.1.5 will discuss various aspects of

modification of the nouns in QCs. Finally, Section 4.1.1.6 concludes by providing a discussion of two related constructions, which we will refer to as the partitive and pseudo-partitive construction.

#### 4.1.1.1. Types of $N_1$ s and $N_2$ s

This section briefly characterizes the types of nouns that can be used as  $N_1$  or  $N_2$  in a quantificational binominal construction (QC).

##### 1. Types of $N_1$ s

Example (2) gives several types of nouns that are frequently used as  $N_1$ s in a QC. These nouns share the semantic property that they can be used to refer to a certain number of entities or a certain quantity of a substance denoted by  $N_2$ .

##### (2) Semantic types of $N_1$ s in quantificational binominal constructions

	EXAMPLES OF NOUNS	EXAMPLE
QUANTIFIER NOUNS (QNS)	<i>aantal</i> ‘number’, ( <i>hele</i> ) <i>boel</i> ‘lot’, <i>hoop</i> ‘lot’, <i>paar</i> ‘couple’, <i>stel</i> ‘couple’, etc.	<i>een hoop problemen</i> a lot [of] problems
MEASURE NOUNS (MNS)	<i>kilo</i> ‘kilo’, <i>liter</i> ‘liter’, <i>meter</i> ‘meter’, <i>dozijn</i> ‘dozen’, <i>gros</i> ‘gross’, etc.	<i>een kilo bonen</i> a kilo [of] beans
CONTAINER NOUNS (CONNS)	<i>doos</i> ‘box’, <i>emmer</i> ‘bucket’, <i>krat</i> ‘crate’, etc.	<i>een doos pillen</i> a box [of] pills
PART NOUNS (PARTNS)	<i>brok</i> ‘piece’, <i>klontje</i> ‘lump’, <i>reep</i> ‘bar’, <i>stuk</i> ‘piece’, etc.	<i>een stuk cake</i> a piece [of] cake
COLLECTIVE NOUNS (COLNS)	<i>dozijn</i> ‘dozen’, <i>groep</i> ‘group’, <i>kudde</i> ‘flock’, <i>paar</i> ‘pair’, <i>rij</i> ‘row’, <i>stapel</i> ‘pile’, <i>serie</i> ‘series’, <i>zwerm</i> ‘swarm’	<i>een groep studenten</i> a group [of] students

Often, some nouns act as belonging to more than one group, which may give rise to ambiguity. This holds especially for quantifier nouns, which often may be either purely quantificational (that is, without any descriptive content), or more referential, that is, with descriptive content that enables them to refer to an entity. A clear example is the noun *paar* ‘couple’. The QC in (3a) is ambiguous between two readings. On the first reading, the noun *paar* acts as a quantifier noun and can be translated as “couple/number of”: the noun has a purely quantificational function and QC refers to a small number of shoes. On the second reading, the noun acts as a collective noun and must be translated as “pair of”: the noun has descriptive content that enables it to denote a certain set of entities, and the QC refers to two shoes that form a pair. Observe that the quantificational reading is not available when  $N_1$  is preceded by a definite article, as in (3b).

- (3) a. *een paar schoenen*  
a couple/pair [of] shoes  
b. *het paar schoenen*  
the pair [of] shoes

Another example involves the noun *aantal* ‘number’ in (4). Example (4a) shows that the noun *aantal* can be used as a quantifier noun when it is preceded by the

indefinite article *een* 'a': the QC refers to a small, but indefinite number of students. However, when *aantal* is preceded by the definite article *het* 'the', as in (4b), it must refer to an actual number; in this case it probably acts as a measure noun.

- (4) a. Er lopen een aantal studenten over het grasveld.  
           there walk a number [of] students across the lawn  
           'A number of students are walking across the lawn.'  
       b. Het aantal studenten is dit jaar weer gedaald.  
           the number [of] students is this year again decreased  
           'The number of students has decreased again this year.'

It is not clear whether the classification in (2) is exhaustive, and occasionally it may be difficult to decide to which semantic class a certain  $N_1$  belongs. Furthermore,  $N_1$ s tend to shift from one class to another (especially in the direction of quantifier nouns) when their referring force weakens, which is what probably happened to the nouns *paar* and *aantal* in (3) and (4), and the same may be true for the quantifier noun *hoop*, which is related to the collective noun *hoop* 'heap'. In this section, such  $N_1$ s will mainly be discussed in their (unmarked) function as quantifier nouns.

Finally, it can be noted that many nouns that normally do not occur as  $N_1$  can enter QCs when they are followed by the unstressed adjective *vol* 'full' in (5a); some formations, like *een handvol* 'a handful of', are even fully lexicalized. The quantificational adjective *heel* 'complete' and some other attributive adjectives may have a similar effect. Some examples are given in (5b&c).

- (5) a. een tafel <sup>??</sup>(vol) cadeaus  
           a table full [of] presents  
       b. een <sup>??</sup>(hele) tafel cadeaus  
           a whole table [of] presents  
       c. een <sup>\*?</sup>(lange) brief jobstijdingen  
           a long letter [of] bad news

## II. Types of $N_2$ s

Example (6) shows that an  $N_2$  can be either a plural count noun or a non-count noun: singular count nouns cannot be used as such. What these two categories have in common is the property of CUMULATIVITY or DIVISIBILITY: the union of two sets of entities denoted by a plural noun results in a larger set of the same entities, and the division of such a set of entities results in smaller sets of the same entities; similarly the union of two quantities of a substance denoted by a non-count noun results in a larger quantity of the same substance, and the division of a quantity of a substance results in smaller quantities of the same substance. This property does not hold for singular nouns: a singular noun refers to an entity and the union of two entities forms a set, while the division of an entity results in entities of a different kind.

(6) Types of N<sub>2</sub>s in quantificational binominal constructions

	COUNT NOUNS		NON-COUNT NOUNS
	PLURAL	SINGULAR	
QN	<i>een hoop problemen</i> a lot [of] problems	<i>*een hoop probleem</i> a lot [of] problem	<i>een hoop lawaai</i> a lot [of] noise
MN	<i>een kilo bonen</i> a kilo [of] beans	<i>*een kilo boon</i> a kilo [of] bean	<i>een kilo kaas</i> a kilo [of] cheese
CONN	<i>een doos pillen</i> a box [of] pills	<i>*een doos pil</i> a box [of] pill	<i>een pot zalf</i> a pot [of] ointment
COLN	<i>een groep studenten</i> a group [of] students	<i>*een groep student</i> a group [of] students	<i>een kudde vee</i> a herd/flock [of] cattle
PARTN	<i>*een stuk koekjes</i> a piece [of] cookies	<i>*een stuk koekje</i> a piece [of] cookie	<i>een stuk cake</i> a piece [of] cake

Example (6) also shows that the part nouns are special in licensing non-count nouns only. There are more instances where additional requirements apply. A quantifier noun like *sloot*, which literally means “ditch”, for example, can normally only be combined with a substance noun denoting a liquid. This is shown in (7a). Similarly, many collective nouns impose special requirements on N<sub>2</sub>: the collective noun *kudde* ‘herd/flock’ in (7b) can only be combined with nouns referring to certain species of mammals, *zwerm* ‘swarm’ mainly with certain types of flying insects, *vlucht* ‘flock’ only with birds, *school* ‘shoal’ only with fish, etc.

- (7) a. *een sloot melk/\*zand/\*boeken*  
a ditch [of] milk/sand/books  
b. *een kudde olifanten/vee*  
a herd [of] elephants/cattle

These special restrictions are by no means strict but violating them will generally result in some special effect. The collective noun *kudde* ‘herd/flock’, for example, can be used derogatively in combination with nouns referring to people, as in example (8a). Here the noun *kudde* is used figuratively, and as a result (8a) can be used to refer to students with certain properties that are normally attributed to elephants or cattle, like being noisy/destructive or docile. In the case of the noun *sloot* ‘ditch’, the difference between (7a) and (8b) has nothing to do with figurative speech, given that *sloot* is hardly ever used literally in QCs; instead, the difference here seems to be that between substances that could fill a ditch and things that could not. In the latter case, *sloot* can also be followed by a plural noun, and the meaning conveyed is typically negative, e.g., “too many”.

- (8) a. *een kudde studenten*  
a herd [of] students  
b. *een sloot kinderen/aanmeldingen*  
a ditch [of] children/applications

4.1.1.2. *The head of the quantificational binominal construction*

It is often not immediately clear whether  $N_1$  or  $N_2$  constitutes the head of a certain QC. This section argues that we have to distinguish the three types of QC in (9), and discusses which types of  $N_1$ s can enter into which types of QC. Some  $N_1$ s may occur in more than one construction type; these  $N_1$ s are often ambiguous between a reading as quantifier noun and one of the other types in example (2) above.

- (9) • Quantificational binominal constructions
- Type 1:  $N_2$  is both the syntactic and the semantic head of the construction
  - Type 2:  $N_1$  is the syntactic and  $N_2$  is the semantic head of the construction
  - Type 3:  $N_1$  is both the syntactic and the semantic head of the construction

4.1.1.2.1. *Determining the syntactic head of the construction*

This section provides two agreement tests to determine which N functions as the *syntactic* head of the binominal construction. These tests will also reveal that QCs are sometimes ambiguous in the sense that both  $N_1$  and  $N_2$  may function as the syntactic head.

I. *Subject-verb (number) agreement*

The first test focuses on the fact that the finite verb agrees in number with the subject of the clause. Given that the two nouns in the QC may differ in number, we can determine the syntactic head of the construction by looking at the number specification of the finite verb: the noun that the verb agrees with is the syntactic head. Example (10) illustrates this for the quantifier noun *boel* ‘a lot’ and the collective noun *groep* ‘group’. In (10a), the number specification on the finite verb clearly shows that we must consider the plural  $N_2$  *studenten* ‘students’ as the syntactic head of the construction and not the singular  $N_1$  *boel*. In (10b), on the other hand, the singular agreement on the verb unambiguously shows that it is the singular  $N_1$  *groep* that acts as the syntactic head.

- (10) a. Er demonstreren/\*demonstreert een boel studenten.  
           there protest<sub>pl</sub>/protests<sub>sg</sub> a lot [of] students  
           ‘A lot of students are demonstrating.’  
       b. Er demonstreert/\*demonstreren een groep studenten.  
           there protests<sub>sg</sub>/protest<sub>pl</sub> a group [of] students  
           ‘A group of students is demonstrating.’

Since we have seen in Section 4.1.1.1 that the noun *aantal* is ambiguous between a quantifier and a collective reading, it is expected that QCs with this noun will show mixed behavior with respect to subject-verb agreement. The examples in (11) show that this expectation is indeed borne out. It must be noted, however, that the two examples seem to differ in their preferential agreement pattern: a search in the *Corpus Gesproken Nederlands* by Van Eerten (2007) has pointed out that in examples like (11a) the majority of cases (76%) exhibit plural agreement, whereas in examples like (11b) there is a clear preference for singular agreement (70%). This may be related to the fact that the QC in (11) is indefinite, and that placement

of indefinite phrases into clause-initial position triggers a partitive reading, which may be more readily available on the referential reading of  $N_1$ .

- (11) a. Er demonstreert/demonstreren een aantal studenten.  
           there protests<sub>sg</sub>/protest<sub>pl</sub> a number [of] students  
           ‘A number of students are demonstrating.’  
       b. Een aantal studenten demonstreert/demonstreren.  
           a number [of] students protests<sub>sg</sub>/protest<sub>pl</sub>  
           ‘A number of students are demonstrating.’

When  $N_1$  is a measure noun, there are also two options: in (12), the verb may exhibit singular agreement, in which case it agrees with the singular  $N_1$  *kilo* ‘kilo’, or plural agreement, in which case it agrees with the plural  $N_2$  *appels* ‘apples’. To our ear, the primeless examples are equally good, whereas the primed examples with the QC in clause-initial position, which is always somewhat marked, clearly prefer singular agreement.

- (12) a. Er ligt een kilo appels op tafel.  
           there lies<sub>sg</sub> a kilo<sub>sg</sub> [of] apples on the table  
       a'. <sup>?</sup>Een kilo appels ligt op tafel.  
       b. Er liggen een kilo appels op tafel.  
           there lie<sub>pl</sub> a kilo [of] apples<sub>pl</sub> on the table  
       b'. \*Een kilo appels liggen op tafel.

This suggests that in this case we are also dealing with an ambiguity between a purely quantificational and a more referential reading of the noun. This seems to be supported by the fact illustrated in the primeless examples in (13) that measure nouns exhibit different behavior with respect to pluralization in the two constructions: these examples show that  $N_1$  is marked for the plural when it agrees with the verb, but not when the verb agrees with  $N_2$ , the substance noun *melk* ‘milk’. From this we must conclude that when the measure noun *liter* is not the syntactic head of the QC, it loses its ability to form a plural, which might be construed as an indication that it has lost its referential status of count noun.

- (13) a. Er staan/\*staat twee liters melk in de koelkast.  
           there stand/stands two liters [of] milk in the fridge  
       a'. <sup>?</sup>Twee liters melk staan in de koelkast.  
       b. Er staat/\*staan twee liter melk in de koelkast.  
           there stands/stand two liter [of] milk in the fridge  
       b'. \*Twee liters melk staat in de koelkast.

This is further supported by the fact that there is also a semantic difference between the examples. In (13a) we perceive the milk as two quantificational units of one liter each; henceforth, we will call this the PACKAGE UNIT READING, given that there is an implication that the milk was purchased in containers that each contain one liter of milk. In (13b), on the other, we do not perceive the milk as being available in certain units: there may be a single container that contains two liters of milk or there may be more, as long as the total quantity is (about) two liters. The primed examples show



again that the QC can only occur in clause-initial position when  $N_1$  has a referential reading.

The ambiguity described above may only arise when the descriptive content of  $N_1$  is weak: it is hard to determine what the denotation set of nouns like *boel* 'a lot', *aantal* 'number', *kilo* 'kilo' and *liter* 'liter' is. When the  $N_1$  does have a clear descriptive content, like the collective and container nouns in (14), agreement with this noun is strongly preferred.

- (14) a. Een kudde olifanten gaat/\*gaan voorbij.  
           a herd [of] elephants passes/pass prt.  
       b. Er ligt/\*liggen een zakje snoepjes op tafel.  
           there lies/lie a bag [of] sweets on the.table

Part nouns like *reep* 'bar' in (15) also seem to have descriptive content, and we therefore expect them to trigger agreement on the verb. This is indeed the case although we cannot show this solely by appealing to the agreement facts because part nouns are always used in combination with a substance noun, which triggers singular agreement on the verb: the fact that the verb in (15a) is singular therefore does not tell us much. The plural agreement in (15b), of course, conclusively shows that  $N_1$  can act as the syntactic head of the construction, but, since we have seen in (13a) that the verb must agree with plural  $N_1$ s, this still does not suffice to exclude the possibility that  $N_2$  may function as the syntactic head in (15a). However, the fact that the part noun counterpart of (13b), given in (15c), is unacceptable seems sufficient to conclude that the part nouns must function as the syntactic head of a QC: if  $N_2$  can act as the syntactic head of the construction, this example should be grammatical.

- (15) a. Er ligt een reep chocola op tafel.  
           there lies a bar [of] chocolate on the.table  
           'There is a bar of chocolate on the table.'  
       b. Er liggen/\*ligt twee repen chocola op tafel.  
           there lie/lies two bars [of] chocolate on the.table  
           'There are two bars of chocolate on the table.'  
       c. \*Er ligt/liggen twee reep chocola op tafel.  
           there lies/lie two bar [of] chocolate on the.table

The examples in (10) to (15) have shown that the number features that trigger number agreement on the finite verb can be either situated on  $N_2$  or on  $N_1$ . The actual choice seems related to whether  $N_1$  is referential or purely quantificational. A purely quantificational noun like *boel* 'lot' in (10) apparently does not have the necessary features to trigger agreement on the verb, whereas referential nouns like the collective noun *kudde* 'herd' in (14a) or the part noun *reep* 'bar' in (15) do have these features. Other nouns, like the measure noun *liter*, seem to have some intermediate status, and the question whether they trigger agreement on the verb or not depends on whether they have a purely quantificational or a more referential function.

## II. Demonstrative pronouns (gender/number agreement)

That both  $N_1$  and  $N_2$  may act as the syntactic head of the construction can also be shown on the basis of demonstrative pronouns. Demonstratives agree with the head noun in gender and number: when the head noun is [+NEUTER, SINGULAR], the proximate and distal demonstrative are, respectively, *dit* ‘this’ and *dat* ‘that’, whereas in all other cases they are respectively *deze* ‘this/these’ and *die* ‘that/those’; cf. Section 5.2.3.1. The examples in (16), which contain a neuter, singular  $N_1$ , show that the proximate demonstrative can indeed agree with both nouns. In the primeless examples the proximate demonstrative agrees with the neuter  $N_1$ , whereas in the primed examples it is the plural/non-neuter  $N_2$  that triggers agreement. Some people object to the primed examples, but the pattern is very common, especially with the noun *paar*: a Google search on the string [*die paar*] in November 2008 resulted in nearly two million hits, and the first 50 cases all instantiated the construction. Examples like (16b’) are less numerous but they do occur: a search on the string [*die pond*] resulted in 3000 hits, and 6 out of the first 50 cases instantiated the construction.

- |         |                  |        |     |                   |        |
|---------|------------------|--------|-----|-------------------|--------|
| (16) a. | dat paar         | eenden | a’. | die paar          | eenden |
|         | that couple [of] | ducks  |     | those couple [of] | ducks  |
| b.      | dat pond         | kaas   | b’. | die pond          | kaas   |
|         | that pound [of]  | cheese |     | that pound [of]   | cheese |

The same thing can be shown for the proximate demonstratives, although the numbers are not as impressive as in the case of the distal ones: our search on the string [*deze paar*] resulted in 14,000 hits, and 46 out of the first 50 instantiated the construction; our search on the string [*deze pond*] resulted in just a single instance of the desired construction.

- |         |                      |        |     |                   |        |
|---------|----------------------|--------|-----|-------------------|--------|
| (17) a. | dit paar             | eenden | a’. | deze paar         | eenden |
|         | this couple [of]     | ducks  |     | these couple [of] | ducks  |
| b.      | dit/dat pond         | uien   | b’. | deze pond         | kaas   |
|         | this/that pound [of] | onions |     | this pound [of]   | cheese |

As expected, the two options in (16) and (17) differ in interpretation. This is clearest in the (a)-examples with the noun *paar*: in the primeless examples, the QC refers to two ducks that belong together and form a couple; in the primed examples, on the other hand, the noun *paar* has a purely quantificational meaning: it merely refers to a small number of ducks. Something similar holds for the (b)-examples: in the primeless examples, the QC refers to a single piece of cheese, whereas no such implication holds for the primed examples. This suggests again that agreement with  $N_1$  is only possible when it is referential: when it is purely quantificational, it is  $N_2$  that enters the agreement relation. This conclusion seems to be supported by the fact, illustrated in (18), that diminutive formation is blocked when  $N_2$  agrees with the demonstrative: this suggests that  $N_1$  has lost its referential status in this case. We will return to this in Section 4.1.1.3.1.

- (18) a. dit/dat paartje eenden  
           this couple<sub>dim.</sub> [of] ducks  
       a'. \*deze/die paartje eenden  
       b. dit/dat pondje kaas  
           this/that pound<sub>dim.</sub> [of] cheese  
           'this piece of cheese that weighs nearly a pound'  
       b'. \*deze/die pondje kaas

Again, the ambiguity only arises with nouns with little descriptive content. It does not occur with container, collective and part nouns. In (19a&b), the container noun *fles* and the collective noun *kudde* are non-neuter, whereas the non-count nouns *bier* and *vee* are neuter, and only the non-neuter demonstratives can be used. In (19c), the part noun *stuk* is neuter, whereas the  $N_2$  *kaas* is non-neuter, and only the neuter demonstrative gives rise to a grammatical result.

- (19) a. deze/die fles bier                   a'. \*dit/dat fles bier  
           this/that bottle [of] beer                   this/that bottle [of] beer  
       b. deze/die kudde vee                   b'. \*dit/dat kudde vee  
           this/that herd [of] cattle                   this/that herd [of] cattle  
       c. dit/dat stuk kaas                   c'. \*deze/die stuk kaas  
           this/that piece [of] cheese                   this/that piece [of] cheese

### III. Conclusion

The two subsections above have shown that subject-verb agreement as well as gender marking on demonstrative pronouns can be determined by either  $N_1$  or  $N_2$ , depending on the type of noun we are dealing with: when we are dealing with a purely quantificational  $N_1$ , it is always  $N_2$  that triggers agreement; when  $N_1$  has descriptive content, that is, when  $N_1$  is a container, collective or part noun, it is  $N_1$  that triggers agreement. The measure nouns seem special in allowing both patterns. Some nouns are ambiguous, and can be used either as a quantifier noun or as a noun of some other type.

#### 4.1.1.2.2. $N_1$ and $N_2$ as the semantic head of the construction

This section discusses the question of what the *semantic* head of the construction is. We will show that QCs are ambiguous in the sense that both  $N_1$  and  $N_2$  may function as the semantic head. For this we will provide evidence involving semantic restrictions imposed by the verb on its arguments, modification by attributive adjectives, and °binding relations between the QC and reciprocal pronouns.

#### I. Semantic selection restrictions of the verb

Verbs may impose several semantic selection restrictions on their arguments. Verbs like *zich verspreiden* 'to disperse' and *omsingelen* 'to surround', for example, generally require a plural noun phrase as their subject: in (20a'), for example, use of the singular noun phrase *de student* 'the student' gives rise to a semantically anomalous result. That the restriction is semantic in nature and not syntactic is clear from the fact that the use of singular noun phrases referring to collections of

entities, like *politie* ‘police’, results in an acceptable construction. The symbol “\$” is used to indicate semantic incompatibility.

- (20) a. De studenten verspreiden zich.  
the students disperse REFL  
a'. De politie/\$student verspreidt zich.  
the police/student disperses REFL  
b. De studenten omsingelen het gebouw.  
the students surround the building  
b'. De politie/\$student omsingelt het gebouw.  
the police/student surrounds the building

That the semantic restriction is not related to syntax is made even clearer by the QC constructions in (21): in (21a) the semantic restriction is satisfied by the syntactic head of the construction, but in (21b) the noun that triggers agreement and the noun that satisfies the semantic restriction are different.

- (21) a. Er omsingelen een aantal studenten het gebouw.  
there surround a number [of] students the building  
‘There are a number of students surrounding the building.’  
b. Een aantal studenten omsingelt het gebouw.  
a number [of] students surround the building  
‘A number of students are surrounding the building.’

Example (21b) conclusively shows that there is no *a priori* reason to assume that  $N_2$  can only act as the semantic head of the QC when  $N_1$  has a purely quantificational meaning. And the examples in (22) show that there is, indeed, no such restriction. Example (22a) shows that a verb like *verzamelen* ‘collect’ requires the direct object to refer to a set of separable entities like stamps or pieces of furniture. The unacceptability of (22b) shows that a noun phrase headed by a container noun like *doos* ‘box’ does not satisfy this selection restriction. The acceptability of (22c) therefore shows that in QCs with a container noun, it is  $N_2$  that satisfies the semantic restrictions.

- (22) a. Jan verzamelde postzegels/porselein.  
Jan collected stamps/china  
b. \$Jan verzamelde een doos.  
Jan collected a box  
c. Jan verzamelde een doos postzegels/porselein.  
Jan collected a box [of] stamps/china

The same can be shown by appealing to other types of semantic restrictions. A verb like *roken* ‘to smoke’, for example, selects a direct object that refers to either some substance like tobacco that can be smoked, or an entity that is made out of this substance, like a cigar; cf. in (23a). Example (23b) is infelicitous given that a noun phrase like *een doos* ‘a box’ does not satisfy this selection restriction. Consequently, the fact that (23c) is acceptable shows that the selection restrictions of the verb can be satisfied by  $N_2$  despite the fact, discussed in 4.1.1.2.1, that  $N_1$  is always the syntactic head of the construction.

- (23) a. Jan rookt tabak/een sigaar.  
 Jan smokes tobacco/a cigar  
 b. <sup>\$</sup>Jan rookt een doos.  
 Jan smokes a box  
 c. Jan rookt een doos sigaren.  
 Jan smokes a box [of] cigars

In passing, note we have put aside that example (23b) is acceptable under a generic/habitual interpretation: *Hij rookt een doos per dag* 'He smokes a box per day'. In cases like these, we are dealing with an elliptic QC construction: Jan does not smoke the box, but its contents. Such constructions are only acceptable when information about the contents of the box is available to the addressee.

It is important to note that the descriptive content of the container noun in the QC *een doos sigaren* in (23c) has been backgrounded in favor of the package unit reading: the QC does not refer to a box with certain contents but to a certain number of cigars. This does not mean, however, that this happens in all cases. Consider the examples in (24), where the verb *sluiten* 'to close' is substituted for the verb *roken* 'to smoke' in (23). The examples in (24a&b) show that the noun phrase *sigaren* cannot satisfy the semantic selection restrictions of this verb, whereas the noun phrase *een doos* can. From the fact that (24c) is acceptable, we must conclude that  $N_1$  functions as the semantic head of the QC, which implies that it has retained its descriptive content: we are still referring to a box with certain contents, not to a number of cigars. The contrast between (23) and (24) therefore shows that QCs headed by a container noun are ambiguous.

- (24) a. <sup>\$</sup>Jan sloot sigaren.  
 Jan closed cigars  
 b. Jan sloot een doos.  
 Jan closed a box  
 c. Jan sloot een doos sigaren.  
 Jan closed a box [of] cigars  
 'Jan closed a box of cigars.'

It seems that the measure, collective and part nouns behave just like the container nouns. We will therefore restrict our discussion of these types by showing in (25) that in QCs headed by these nouns,  $N_2$  may also satisfy the semantic selection restrictions imposed by the verb.

- (25) a. Jan at een kilo paddenstoelen.  
 Jan ate a kilo [of] mushrooms  
 b. Hij is gestoken door een zwerm wespen.  
 he has.been stung by a swarm [of] wasps  
 c. Hij heeft een stuk taart opgegeten.  
 he has a piece [of] cake prt.-eaten

This subsection has shown that most QCs are ambiguous depending on whether  $N_1$  receives a more referential or a more quantification interpretation: in the former case it is  $N_1$  that functions as the semantic head of the construction and in the latter case it is  $N_2$  that has this function. The question which head functions as the

semantic head is independent of the question which head functions as the syntactic head: the two functions may but need not be performed by the same noun. The quantifier nouns are different from the other nouns in that they never function as the semantic head of the construction, which is related to the fact that they do not have much descriptive content to begin with.

## II. Attributive modification

That  $N_2$  can be the semantic head of the construction is also clear from the fact that the QC as a whole can be modified by attributive modifiers that belong to  $N_2$  rather than to  $N_1$ . Some examples are given in (26). The primeless and primed examples are more or less synonymous, which suggests that the attributive adjective modifies  $N_2$  in both cases.

- (26) a. een koud glas bier      a'. een glas koud bier  
         a cold glass [of] beer      a glass [of] cold beer  
       b. een lekker glas bier      b'. een glas lekker bier  
         a tasty glass [of] beer      a glass [of] tasty beer

That it is not  $N_1$  that is modified is particularly clear from the examples in (27a&b): in these examples the adjectives can only modify the noun *glas*, as a result of which the primeless and primed examples are no longer synonymous. Furthermore, example (27b) receives an anomalous interpretation (which seems to be marginally accepted by some speakers).

- (27) a. <sup>#</sup>een koud glas met bier      a'. een glas met koud bier  
         a cold glass with beer      a glass with cold beer  
       b. <sup>s</sup>een lekker glas met bier      b'. een glas met lekker bier  
         a tasty glass with beer      a glass with tasty beer

The unacceptability of (28) points in the same direction: given the fact that *vies* 'unsavory' and *lekker* 'tasty' are antonyms, the structure results in a contradiction (it must be noted, however, that examples like these are sometimes used as puns).

- (28) <sup>#</sup>een *lekkere* kop *vieze* koffie  
         a nice cup [of] bad coffee

The fact that the adjective is allowed to modify  $N_2$  does not imply that it also agrees with this noun in number/gender. This is illustrated in (29): example (29a) shows that the non-neuter substance noun *wijn* requires that the inflected form of the adjective be used; in (29b), on the other hand, the *-e* ending is absent because the adjective agrees with the singular neuter noun *glas*.

- (29) a. een lekkere/\*lekker wijn  
         a tasty wine  
       b. een lekker/\*lekkere glas wijn  
         a tasty glass [of] wine

There seem to be certain restrictions on the availability of the intended reading, which are not entirely clear.. For example, although the QC in (30a) can be found on the internet (2 hits), we have the impression that the order in (30a') is much

preferred. Example (30b), furthermore, shows that when the adjective and  $N_2$  form a fixed collocation, like *witte wijn* 'white wine', the adjective must immediately precede  $N_1$ : the primeless example can only refer to a white bottle.

- (30) a. <sup>?</sup>een zure fles melk      a'. een fles zure melk  
          a sour bottle [of] milk      a bottle [of] sour milk  
      b. <sup>#</sup>een witte fles wijn      b'. een fles witte wijn  
          a white bottle [of] wine      a bottle [of] white wine

Finally, when the attributive adjective can also be used to modify  $N_1$ , the reading in which the adjective preceding  $N_1$  modifies  $N_2$  is excluded: the two (a)-examples in (31) are not synonymous, and example (31b) does not lead to a contradiction.

- (31) a. een kleine doos knikkers  
          a small box [of] marbles  
      a'. een doos kleine knikkers  
          a box [of] small marbles  
      b. een grote doos kleine knikkers  
          a big box [of] small marbles

So far we have only used container nouns, but the (a)- and (b)-examples in (32) show that similar facts can be found with, respectively, collective and part nouns. That we are dealing here with a modifier of  $N_2$  and not with a modifier of  $N_1$  is supported by the fact that  $N_1$  can only be modified by a very small class of attributively used adjectives; see Section 4.1.1.3.2, sub V, for discussion and examples.

- (32) a. een gezellige groep studenten  
          a sociable group [of] students  
      a'. een luidruchtige groep studenten  
          a noisy group [of] students  
      b. een geel stuk krijt  
          a yellow piece [of] chalk  
      b'. een dodelijk brok radioactief afval  
          a deadly piece [of] radioactive waste

This does not mean, however, that the modifier can always precede  $N_1$ : the examples in (33) show that quantifier and measure nouns do not license this kind of modification; the modifier of  $N_2$  must follow  $N_1$ .

- (33) a. een aantal luidruchtige studenten  
          a number [of] noisy students  
      a'. <sup>\*?</sup>een luidruchtig aantal studenten  
      b. een kilo geel krijt  
          a kilo [of] yellow chalk  
      b'. <sup>\*?</sup>een geel kilo krijt

### III. Binding

That N<sub>2</sub> can be the semantic head of a QC can also be shown by means of the interpretation of the reciprocal pronoun *elkaar* ‘each other’, which must have a °c-commanding syntactically plural antecedent; cf. Section 5.2.1.5, sub III. For our present purpose, it suffices to say that a reciprocal pronoun that functions as a (PP-)object of the verb can be interpreted as coreferential with the subject of the clause but not with some noun phrase embedded in the subject of the clause. In (34a), for example, *elkaar* can be bound by the subject *de ouders van Jan en Marie* ‘Jan and Marie’s parents’, but crucially not by the noun phrase *Jan and Marie*. The same thing holds for (34b) where the noun phrase *hun ouders* ‘their parents’ can be coreferential with *elkaar*, whereas the possessive pronoun *hun* ‘their’ embedded in the subject cannot.

- (34) a. [<sub>NP</sub> De ouders [<sub>PP</sub> van [<sub>NP</sub> Jan en Marie]<sub>j</sub>]<sub>i</sub> slaan elkaar<sub>i/\*j</sub>.  
           the parents           of           Jan and Marie           beat each.other  
       b. [<sub>NP</sub> Hun<sub>j</sub> ouders]<sub>i</sub> slaan elkaar<sub>i/\*j</sub>.  
           their parents       beat   each.other

The examples in (35) show that N<sub>2</sub> cannot be considered as embedded in the subject in the same way as, for instance, the possessive pronoun *hun* ‘their’ in (34b). Irrespective of the type of N<sub>1</sub>, N<sub>2</sub> is able to bind the reciprocal *elkaar* ‘each other’. Note that we do not include examples of a QC with a part noun because these nouns can only be combined with non-count nouns, which cannot act as the antecedent of a reciprocal.

- (35) a. Een hoop pieren<sub>i</sub> krioelen/<sup>2</sup>krioelt door elkaar<sub>i</sub>. [QN]  
 a couple [of] rain.worms swarm/swarms through each.other  
 b. Een pond pieren<sub>i</sub> krioelt/<sup>2</sup>krioelen door elkaar<sub>i</sub>. [MN]  
 a pound [of] rain.worms swarms/swarm through each.other  
 c. Een emmer pieren<sub>i</sub> krioelt/\*krioelen door elkaar<sub>i</sub>. [ConN]  
 a bucket [of] rain.worms swarms/swarm through each.other  
 d. Een club toeristen<sub>i</sub> fotografeert/\*fotograferen elkaar<sub>i</sub>. [ColN]  
 a club [of] tourists photographs/photographs each.other

The fact that N<sub>2</sub> can act as the antecedent of the reciprocal pronoun indicates that it can act as the semantic head of the QC. Note that the agreement on the verb shows that N<sub>2</sub> need not be the syntactic head of the construction; this is the case if N<sub>1</sub> is a quantifier noun, as in (35a), but not in the other cases.

#### 4.1.1.2.3. The quantificational and referential interpretation of $N_I$

In the preceding discussion it has been claimed several times that  $N_1$  can have either a quantificational or a referential interpretation. In the former case the noun merely indicates a certain amount or quantity and in the latter case it refers to an actual object in the domain of discourse. Only in the latter case can  $N_1$  be a discourse referent, which can be made clear by means of data involving pronominal reference. Consider the examples in (36). In (36a), it is  $N_1$  that satisfies the selection restrictions of the verb *vasthouden* 'to hold', and it must therefore refer to an actual object in the domain of discourse. Consequently, the QC contains two referential



expressions, and, as is shown in (36b&c), pronouns can be used to refer back to either of these expressions: *het* ‘it’ in (36b) refers back to the neuter noun *glas* ‘glass’ and *ze* in (36c) refers back to the feminine substance noun *melk* ‘milk’.

- (36) a. Jan houdt een glas<sub>i</sub> melk<sub>j</sub> vast.  
          Jan holds a glass [of] milk prt.  
      b. Het<sub>i</sub> is mooi versierd.  
          it is beautifully decorated  
      c. Ze<sub>j</sub> is zuur.  
          it is sour

In (37a), on the other hand, N<sub>1</sub> has a quantificational reading, and (37b) shows that in this case using the pronoun *het* to refer back to the QC gives rise to a semantically anomalous result; only the pronoun *ze* ‘she’, corresponding to the N<sub>2</sub> *melk* ‘milk’, can be used to refer to the QC, as in (37c). This indicates that N<sub>1</sub> is here not referential but purely quantificational.

- (37) a. Jan drinkt een glas<sub>i</sub> melk<sub>j</sub>.  
          Jan drinks a glass [of] milk  
      b. <sup>s</sup>Het<sub>i</sub> is mooi versierd.  
          it is beautifully decorated  
      c. Ze<sub>j</sub> is zuur.  
          it is sour

4.1.1.2.4. *Summary*

This section has shown that there are different types of QCs, depending on which noun acts as the syntactic or the semantic head of the construction. The noun that triggers agreement on the finite verb or on a demonstrative is the syntactic head of the construction, whereas the noun that satisfies the selection restrictions imposed by the main verb is the semantic head. The results are summarized in Table 1, although it must be noted that this table provides an idealized picture of the actual facts since we have seen earlier that various N<sub>1</sub>s seem to be shifting in the direction of the quantifier noun.

Table 1: *Types of binominal quantificational construction*

	QN		MN		CONN		PARTN		COLN	
	N1	N2	N1	N2	N1	N2	N1	N2	N1	N2
syntactic head	—	+	+	+	+	—	+	—	+	—
semantic head	—	+	+	+	+	+	+	+	+	+

Table 1 suggests that there are three types of N<sub>1</sub>. The first type is comprises the quantifier nouns, which are purely quantificational and require that N<sub>2</sub> be both the syntactic and the semantic head of the QC. The second type are the container, collective and part nouns: they are always referential and may function both as the syntactic and the semantic head of the QC; the descriptive content of these nouns can, however, be backgrounded in favor of a more quantification reading, and in that case N<sub>2</sub> will be construed as the semantic head of the QC. The third type

includes only the measure nouns. These seem to be of a somewhat hybrid nature in the sense that they can have either a purely quantificational or a referential, package unit reading (with the former probably being the unmarked case): in the former case the measure noun behaves like a quantifier noun and in the latter like a container, collective or part noun. In the next section, we will see that these distinctions correspond nicely to the morphological and syntactic behavior of these nouns.

#### 4.1.1.3. Properties of $N_1$

In Section 4.1.1.2 we distinguished the three types of  $N_1$ s listed in (38), and in this section we will investigate the properties of these types. We will show that  $N_1$ s of type (38a) are deficient in several respects, whereas  $N_1$ s of type (38b) behave like regular nouns.  $N_1$ s of type (38c) show mixed behavior: in some contexts they exhibit deficient behavior, whereas in other contexts they behave just like regular nouns.

- (38)      • Types of  $N_1$ s:
- a. purely quantificational: quantifier nouns
  - b. referential: container, part and collective nouns
  - c. mixed: measure nouns

##### 4.1.1.3.1. Morphological properties

This section discusses the morphological properties of the different types of  $N_1$ . We will first discuss their ability to undergo pluralization and diminutivization, and then their ability to enter into the process of nominal compounding.

#### 1. Pluralization

The primeless examples in (39) show that all  $N_1$ s can be preceded by the indefinite determiner *een* 'a'. This suggests that we are dealing with count nouns, and we therefore expect pluralization to be possible. The primed examples show that this is indeed possible with most  $N_1$ s, but that the quantifier noun in (39a') resists the formation of a plural. Furthermore, (39b') shows that the plural marking on the measure noun *liter* is optional.

- |         |                       |                            |         |
|---------|-----------------------|----------------------------|---------|
| (39) a. | een boel mensen       | a'. *vier boel(en) mensen  | [QN]    |
|         | a lot [of] people     | four lot(s) [of] people    |         |
| b.      | een liter melk        | b'. twee liter(s) melk     | [MN]    |
|         | a liter [of] milk     | two liter(s) [of] milk     |         |
| c.      | een emmer peren       | c'. vier emmers peren      | [ConN]  |
|         | a bucket [of] pears   | four buckets [of] pears    |         |
| d.      | een reep chocolade    | d'. vier repen chocolade   | [PartN] |
|         | a bar [of] chocolate  | four bars [of] chocolate   |         |
| e.      | een groep studenten   | e'. vier groepen studenten | [CoIN]  |
|         | a group [of] students | four groups [of] students  |         |

The general pattern in (39) is compatible with the classification in (38): quantifier nouns lack a plural form, whereas the referential nouns do allow plural formation. And, as expected, the measure nouns show mixed behavior: they may or may not take

the plural suffix depending on whether they have a quantificational or a referential, package unit reading. Still, there are a number of complications that we will discuss in the following subsections.

#### A. Ambiguous $N_1$ s

Some nouns are ambiguous between a purely quantificational reading and a referential reading, and it will not come as a surprise that these can enter the constructions in two forms. The examples in (40) illustrate this for the collective noun *paar* 'pair'. Example (40a) represents the—probably unmarked—quantificational reading: the QC refers to a quantity of eight shoes/books that consists of four sets of two shoes, which may or may not form a pair. Example (40b), of course, also refers to eight shoes, but now it is implied that the shoes make up four pairs; the markedness of (40b') is due to the fact that books normally do not come in pairs.

- (40) a. vier paar        schoenen/boeken  
          four pairs [of] shoes/books  
       b. vier paren        schoenen  
          four pairs [of] shoes  
       b'. ??vier paren        boeken  
          four pairs [of] books

For completeness' sake, note that whereas the QC in (40a) refers to exactly eight shoes/books, the QC *een paar schoenen/boeken* may refer to any small number of books; the cardinality can be equal or larger than 2.

#### B. Measure nouns involved in linear measurement

Measure nouns like *liter* in (39b') are ambiguous between a purely quantificational and a referential reading. On the quantificational reading the measure noun takes the singular form and the QC in (39b') simply refers to a certain quantity of milk without any implication about the packaging units of the milk; on the referential, package unit reading the measure noun takes the plural form and the QC refers to two separate units of milk of one liter each. In some cases, however, the referential reading seems to be blocked: this is illustrated in (41) for measure nouns involved in linear measurement.

- (41) a. Er    viel    twee meter sneeuw.  
          there fell<sub>sg</sub> two meter [of] snow  
       b. \*?Er    vielen    twee meters sneeuw.  
          there fell<sub>pl</sub> two meters [of] snow

The infelicity of (41b) is probably due to the fact that the noun phrase *twee meter sneeuw* does not refer to a fixed quantity of snow given that the quantity depends on the surface area that we are talking about: the noun phrase *twee meter* is related to the height of the snow, but the length and width of the area covered with snow is left open. When the  $N_2$  is such that only one dimension is considered relevant, the use of the measure phrase will give rise to an interpretation involving a certain, more or less fixed, quantity of a substance, and consequently the result improves greatly. This is illustrated in (42): whereas (42a) leaves open the question of how

many pieces of rope we are dealing with, the noun phrase in (42b) refers to five pieces of rope of 1 meter each.

- (42) a. Er was vijf meter touw over.  
           there was five meter [of] rope left  
       b. <sup>?</sup>Er waren vijf meters touw over.  
           there were five meters [of] rope left

The examples in (43) show that pluralization of measure nouns does not necessarily give rise to a referential, package unit interpretation: this is only the case when the measure noun is preceded by a numeral; when a numeral is lacking and the measure noun is given accent, a purely quantificational, in this case “high quantity”, reading is again possible. That the constructions in (43) are purely quantificational is also clear from the fact that the QCs trigger singular agreement on the verb. Observe that on the intended reading, the properties of N<sub>2</sub> do not affect acceptability: in contrast to (41b), example (43b) is fully acceptable.

- (43) a. Hij dronk LITERS melk.  
           he drank<sub>sg.</sub> liters [of] milk  
           ‘He drank many liters of milk.’  
       b. Er viel METERS sneeuw.  
           there fell<sub>sg.</sub> meters [of] snow  
           ‘there fell many meters of snow’  
       c. Er lag METERS touw.  
           there lay<sub>sg.</sub> meters [of] rope  
           ‘Many meters of rope were lying there.’

The “high quantity” reading is also available with container nouns like *emmer* ‘bucket’. However, since example (44a) shows that a QC with this reading triggers plural agreement, it is clear that the container noun must still be considered a regular, referential noun. The part nouns and collective nouns do not allow this “high quantity” reading, which is indicated in (44b&c) by means of a number sign. This difference between the container nouns, on the one hand, and the part and collective nouns, on the other, again suggests that the division between quantificational and referential nouns is not sharp, but gradual.

- (44) a. Er stonden EMMERS peren.  
           there stood buckets [of] pears  
           ‘There stood many buckets of pears.’  
       b. <sup>#</sup>Er lagen REPEN chocola.  
           there lay bars [of] chocolate  
       c. <sup>#</sup>Er liepen GROEPEN studenten.  
           there walked groups [of] students

Finally, note that, unlike cardinal numerals, individuating quantifiers like *enkele* ‘some’ and *vele* ‘many’ always trigger the plural suffix on the measure noun. The agreement on the verb can be singular, just as with the numerals in (41). This is shown in (45).

- (45) a. Hij dronk enkele/vele liters/\*liter bier.  
           he drank some/many liters/liter [of] beer  
       b. Er viel/\*<sup>?</sup>vielen enkele meters sneeuw.  
           there fell<sub>sg/pl</sub> some meters [of] snow  
           ‘there fell many meters of snow’

### C. Nouns involved in the measurement of time

Measure nouns involved in measuring time must be plural when preceded by a numeral, as shown by (46a). Nevertheless, we are dealing with a purely quantificational construction here: the QC does not refer to five separate units of vacation of a week each — in fact, there is no implication whatsoever about the temporal units involved.

- (46) a. We hebben vijf weken/\*week vakantie per jaar.  
           we have five week<sub>pl/sg</sub> [of] vacation per year  
       b. Vijf weken vakantie per jaar is/\*<sup>?</sup>zijn eigenlijk te weinig.  
           five weeks [of] vacation per year is/are actually too little

It is not clear to us whether the QC *vijf weken vakantie* should be treated on a par with QCs like *twee liter melk*. Apart from the difference in plural marking, the two constructions differ in that in the former the N<sub>2</sub> *vakantie* can be replaced by the adjective *vrij* ‘free/off’ without any clear difference in meaning, whereas adjectives can never be combined with a measure noun like *liter*. This fact suggests that we are dealing with a °second order predicate in example (46b). This would also account for the fact that the binominal construction in (46b) triggers singular agreement on the verb despite the fact that N<sub>1</sub> is plural: the verb always exhibits singular agreement when we are dealing with second order predication.

- (47) Vijf weken vrij per jaar is eigenlijk te weinig.  
       five weeks off per year is actually too little

### II. Diminutive formation

The three types of N<sub>1</sub>s also differ with respect to diminutive formation. The examples in (48c-d) show that the referential nouns allow it, whereas (48a) shows that quantifier nouns do not. As expected, the measure nouns again show mixed behavior: diminutivization is possible when they are interpreted referentially, but not when they are interpreted quantificationally. That the diminutive is derived from the referential and not the quantificational measure noun is clear from the fact illustrated by (48b’) that they must be pluralized when preceded by a cardinal numeral.

- |                                    |   |        |
|------------------------------------|---|--------|
| (48) a. *een boeltje mensen        |   | [QN]   |
| a lot <sub>dim</sub> [of] people   |   |        |
| b. een litertje melk               | b’. twee litertjes/*litertje melk                         | [MN]   |
| a liter <sub>dim</sub> [of] milk   | two liters <sub>dim</sub> /liter <sub>dim</sub> [of] milk |        |
| c. een emmertje peren              | c’. twee emmertjes peren                                  | [ConN] |
| a bucket <sub>dim</sub> [of] pears | two buckets <sub>dim</sub> [of] pears                     |        |

- |    |                                      |     |   |         |
|----|--------------------------------------|-----|---|---------|
| d. | een reep <b>j</b> e chocolade        | d'. | twee reep <b>j</b> es chocolade         | [PartN] |
|    | a bar <sub>dim</sub> [of] chocolate  |     | two bars <sub>dim</sub> [of] chocolate  |         |
| e. | een groep <b>j</b> e studenten       | e'. | twee groep <b>j</b> es studenten        | [ColN]  |
|    | a group <sub>dim</sub> [of] students |     | two groups <sub>dim</sub> [of] students |         |

Note that *een beetje* 'a bit' in *een beetje water* 'a bit of water' is only an apparent counterexample to the claim that quantificational N<sub>1</sub>s do not undergo diminutivization: *een beetje* is a lexicalized formation, which is clear from the fact that it does not have a counterpart without the diminutive suffix: *\*een beet water*. The plural form *??twee beetjes water* also seems degraded (although a number of rather forced cases can be found on the internet).

### III. Nominal compounds

The data discussed in Subsections I and II show that it is necessary to make a distinction between purely quantificational and referential N<sub>1</sub>s. Only the latter allow pluralization and diminutive formation. This distinction seems supported by data involving compounding. The denotation of a nominal compound is mainly determined by its second member, which can be considered the head of the compound; the first member only has the function of further specifying the denotation of the second one; cf. Section 1.4. This is clear from the fact that a *tafelaaansteker* 'table lighter' is a kind of lighter, not a kind of table. Given this, we predict that only referential nouns can appear as the head/second member of a compound.

The examples in (49) show that this prediction is indeed correct. The first prediction is that the container, part, and collective nouns can appear as the head of a compound, and the acceptability of (49c-e) shows that this is indeed the case, although we must note that *perenemmer* is a possible, but non-attested word. The second prediction is that the quantifier nouns cannot occur as the head of a compound given that they do not have a denotation, and (49a) shows that this is again the case. A problem is that we expect the measure nouns to exhibit mixed behavior, whereas they actually pattern with the quantifier nouns. This suggests that the referential reading of measure nouns is rather marked, and only arises under strong pressure from the context.

- |         |                |         |
|---------|----------------|---------|
| (49) a. | *mensenboel    | [QN]    |
|         | people-lot     |         |
| b.      | *melkliter     | [MN]    |
|         | milk-liter     |         |
| c.      | perenemmer     | [ConN]  |
|         | pears-bucket   |         |
| d.      | chocoladereep  | [PartN] |
|         | chocolate-bar  |         |
| e.      | studentengroep | [ColN]  |
|         | students-group |         |

Note that the quantificational force of the container, part, and collective nouns has completely disappeared in the compounds in (49c-e). This also holds for nouns that are normally used as quantifier nouns. For example, in a compound like *beestenboel*

‘pig-sty’, the head of the compound is not the quantifier noun *boel* but a noun denoting collections of things that need not necessarily belong together. Similarly, the meaning of the second member of compounds like *studentenaantal* ‘number of students’ is not related to the quantificational interpretation of *aantal*, but to its referential interpretation; cf. the discussion of example (4).

IV. Conclusion

The findings in Subsections I to III, summarized in Table 2, have shown that we must make a distinction between N<sub>1</sub>s that are purely quantificational and N<sub>1</sub>s that are more referential in nature. Quantifier nouns belong to the first kind; container, part and collective nouns all belong to the second type; and measure nouns are ambiguous between the first and the second type.

Table 2: Morphological properties of N<sub>1</sub>s

	QUANTIFICATIONAL	MIXED	REFERENTIAL		
	QN	MN	CONN	PARTN	COLN
PLURAL	—	+/—	+	+	+
DIMINUTIVE	—	+/—	+	+	+
COMPOUNDING	—	+/—	+	+	+
REFERENTIAL	—	+/—	+	+	+

The pattern in Table 2 corresponds nicely with our findings in Table 1: that quantifier nouns are purely quantificational is in accordance with the fact that they cannot trigger agreement on the finite verb or a demonstrative; that measure nouns are ambiguous between a purely quantificational and a referential, package unit reading is in accordance with the fact that either they or N<sub>2</sub> may trigger agreement; that container, part and collective nouns are referential is consistent with the fact that they block agreement between N<sub>2</sub> and the finite verb or the demonstrative. The fact that all N<sub>1</sub>s have some quantificational force is consistent with the fact that in all cases, N<sub>2</sub> can be interpreted as the semantic head of the construction.

4.1.1.3.2. Syntactic properties: determiners and prenominal modifiers

Section 4.1.1.3.1 has shown that the classification in (38) into quantificational, referential and hybrid N<sub>1</sub>s is reflected by the morphological behavior of these nouns. This section will show that the classification is also reflected by their syntactic properties, especially in the type of determiners and (quantificational) modifiers they may have; the purely quantificational nouns are more restricted in this respect than the referential ones. For example, given that a definite article is used to identify a specific entity that is part of the denotation of the noun, we expect that they can only combine with referential nouns, which have such a denotation, and not with purely quantificational nouns, which lack such a denotation.

I. Articles

Example (50) illustrates again that all N<sub>1</sub>s can be preceded by the indefinite article *een*. When we are dealing with a quantifier noun, however, the definite article cannot be substituted for the indefinite one. With measure nouns this is possible,

although this results in the loss of the purely quantificational reading: *het ons kaas* refers to a certain piece or quantity of cheese that can be identified by the addressee. The remaining types of N<sub>1</sub>s can all be preceded by both the definite and the indefinite article. Observe that it is N<sub>1</sub> that agrees in gender and number with the article: the N<sub>2</sub>s in (50) would all select the article *de*, not *het*; cf. the discussion of example (16) in Section 4.1.1.2.1.

(50) • Indefinite/definite articles

a.	een boel studenten	a'.	*de boel studenten	[QN]
	a lot [of] students		the lot [of] students	
b.	een ons kaas	b'.	het ons kaas	[MN]
	an ounce [of] cheese		the ounce [of] cheese	
c.	een kistje sigaren	c'.	het kistje sigaren	[ConN]
	a box <sub>dim</sub> [of] cigars		the box <sub>dim</sub> [of] cigars	
d.	een stuk zeep	d'.	het stuk zeep	[PartN]
	a piece [of] soap		the piece [of] soap	
e.	een groepje studenten	e'.	het groepje studenten	[ColN]
	a group <sub>dim</sub> [of] students		the group <sub>dim</sub> [of] students	

It must be noted, however, that many noun phrases that normally do not allow a definite article can be preceded by it when they are modified: a proper noun like *Amsterdam*, for example, normally cannot be preceded by the definite article, but when it is modified by, e.g., a relative clause the definite article is licensed: *het Amsterdam* \*(*dat ik zo goed ken*) 'the Amsterdam that I know so well'. The examples in (51) show that quantifier nouns exhibit ambiguous behavior in this respect: some, like *boel* in (51a), do not allow the definite determiner in these modified contexts either, while others, like *paar* 'couple of' or *stoot* 'lot of' in (51b), are compatible with the determiner in such contexts.

- (51) a. \*de boel studenten (die ik ken)  
           the lot [of] students that I know  
       b. de paar/stoot boeken \*(die ik heb gelezen)  
           the couple/lot [of] books that I have read

Note, however, that the determiner in (51b) is probably not part of the noun phrase headed by N<sub>1</sub>, but of the noun phrase headed by N<sub>2</sub>. A reason to assume this is that the noun *paar* is neuter (at least in its use as a collective noun), and should therefore select the definite determiner *het*, not *de* as is the case in (51b): *het/\*de paar schoenen* 'the pair of shoes'. This suggests that the construction in (51b) is similar to the quantified constructions in (52), where the article is undisputedly selected by the noun.

- (52) a. de vijftientwintig boeken ??(die ik gisteren heb besteld)  
           the twenty-five books that I yesterday have ordered  
       b. de vele boeken ??(die ik heb gelezen)  
           the many books that I have read

The fact that quantifier nouns normally cannot be preceded by a definite article may cast some doubt on the assumption that the element *een* in constructions with



- That we are dealing with a “spurious article” when the noun is purely quantificational can be indirectly supported by the fact illustrated in (54a) that German *ein* is not morphologically marked for case when it precedes a quantifier noun, as it would normally be when it is part of a referential noun phrase; cf. (54b), where the noun *Paar* is referential and the article *ein* has the dative ending *-em*.

- Another reason to assume that the element *een* in *een boel mensen* differs from the other occurrences of *een* in (50) is that it cannot be replaced by its negative counterpart *geen* ‘no’. This is illustrated in (55); note especially the difference between (55a) and (55e), which form a minimal pair (provided we abstract away from the agreement on the finite verb).

- The data in this subsection suggest that quantifier nouns cannot be preceded by an article. In (50a), the element *een* is a spurious indefinite article, which is possibly related to the modifier *een* in examples like (53). The other types of N<sub>1</sub> occur both with the indefinite and the definite article.

## II. Demonstrative pronouns

Demonstrative pronouns exhibit a pattern similar to the definite article. Example (56a) shows that a quantifier noun like *boel* never occurs with a demonstrative pronoun, whereas other quantifier nouns, like *paar* in (56b), are more readily acceptable with demonstrative pronouns (especially the proximate ones). Note that it is not necessary to modify the QC in (56b), which may be due to the fact that the demonstratives themselves function as modifiers in the sense that they imply some partitioning of the set denoted by  $N_2$ ; cf. Section 5.2.3.

- (56) a. \*Deze/Die boel boeken (die ik gelezen heb) liggen daar.  
           these/those lot [of] books that I read have lie there  
       b. Die/?Deze paar euro's (die hij me gaf) maken geen verschil.  
           those/these couple [of] euros that he me gave make no difference  
           'those few euros he gave me make no difference.'

Recall from Section 4.1.1.2.1 that the demonstratives in (56b) do not agree in gender and number with  $N_1$  but with  $N_2$ . This can be readily illustrated by means of the minimal pair in (57). In (57a), the QC refers to two shoes that form a pair: the neuter noun *paar* is therefore referential and the demonstrative agrees with it. In (57b), the QC refers to a set of two or more shoes: the neuter noun *paar* is therefore purely quantificational and the demonstrative agrees with  $N_2$ .

- (57) a. dit/dat paar schoenen [ColN]  
           this/that pair [of] shoes  
       b. deze/die paar schoenen [QN]  
           these/those couple [of] shoes

Section 4.1.1.2.1 has already shown that QCs containing a measure noun exhibit the same ambiguity as *paar*, albeit that the construction in which the demonstrative agrees with  $N_2$  is considered marked by some speakers. The relevant examples are repeated in (58a&b).

- (58) a. dit/dat<sub>[+neuter,+sg]</sub> pond<sub>[+neuter]</sub> uien  
           this/that pound [of] onions  
       b. %deze/die<sub>[-neuter,-sg]</sub> pond uien<sub>[-neuter,-sg]</sub>  
           these/those pound [of] onions

The examples in (59) show that the remaining types of  $N_1$ s can freely occur with demonstrative pronouns. The demonstrative pronouns in (59) must agree with  $N_1$ ; replacing them by *deze/die* leads to ungrammaticality.

- (59) a. dit/dat<sub>[+neuter]</sub> kistje<sub>[+neuter]</sub> sigaren  
           this/that box<sub>dim</sub> [of] cigars  
       b. dit/dat<sub>[+neuter]</sub> stuk<sub>[+neuter]</sub> zeep  
           this/that piece [of] soap  
       c. dit/dat<sub>[+neuter]</sub> groepje<sub>[+neuter]</sub> studenten  
           this/that group<sub>dim</sub> [of] students

The examples in this section have shown that demonstrative pronouns can only appear with a subset of the quantifier nouns; when possible, the demonstrative

agrees in gender and number with N<sub>2</sub>. Container, part and collective nouns can readily be combined with demonstrative pronouns, and agree with them in number and gender. Measure nouns, again, show a more hybrid behavior.

### III. Possessive pronouns

Example (60a) shows that possessive pronouns always seem to give rise to a degraded result with quantifier nouns, regardless of whether a modifier is present or not. The use of a possessor is at least marginally possible with a measure noun like *pond* in (60b): the measure noun must receive a referential interpretation in this case. Possessive pronouns are readily possible with the referential nouns in (60c-e).

- (60) a. \*mijn paar boeken (die ik gelezen heb)  
           my couple [of] books that I read have  
       b. ?Hier ligt mijn pond kaas, en daar het jouwe.  
           here lies my pound of cheese and there yours  
       c. mijn kistje sigaren  
           my box<sub>dim</sub> [of] cigars  
       d. mijn stuk zeep  
           my piece [of] soap  
       e. zijn groepje studenten  
           his group<sub>dim</sub> [of] students

### IV. Quantifiers and cardinal numerals

The examples in (61) show that a quantifier noun like *boel* 'lot of' cannot be preceded by a quantifier or numeral. The ungrammaticality of (61a) is not surprising given that the quantifiers *sommige* 'some'/'*alle* 'all' and the numeral *vier* 'four' require a plural noun, whereas the quantifier noun cannot be pluralized; cf. (39). That appealing to this fact is not sufficient to account for the ungrammaticality of (61a) is clear from the ungrammaticality of (61b): the distributive quantifier *elk* 'each' requires a singular noun.

- (61) a. \*sommige/alle/vier boel(en) schoenen  
           some/all/four lot(s) [of] shoes  
       b. \*elke boel schoenen  
           each lot [of] shoes

The ungrammaticality of the examples in (61) must therefore be related to the quantificational function of the quantifier nouns. This can be done by appealing to the fact, which will be discussed extensively in Chapter 6, that quantifiers and numerals operate on sets; given that quantifier nouns do not denote sets, the quantifier/numeral cannot perform its function. Note that the quantifier/numeral cannot operate on N<sub>2</sub> either since that is precisely the function of the quantifier noun: it is never possible to have two quantifiers or numerals that take °scope over the same noun phrase.

The examples in (62) show that container, part and collective nouns freely co-occur with quantifiers. It must be noted, however, that these nouns have lost their quantificational property in the sense that in these cases the QCs refer to concrete cups, pieces and flocks.

- (62) a. sommige/alle/vier koppen koffie      a'. elke kop koffie  
           some/all/four cups [of] coffee        each cup [of] coffee  
       b. sommige/alle/vier stukken taart      b'. elk stuk taart  
           some/all/four pieces [of] cake        each piece [of] cake  
       c. sommige/alle/vier kuddes geiten      c'. elke kudde geiten  
           some/all/four flocks [of] goats        each flock [of] goats

As noted previously, some N1s, like *paar* 'pair', can be used both as a purely quantificational and as a referential noun. Given the observations above, we expect that the addition of a quantifier will have a disambiguating effect. This is indeed borne out given that the examples in (63) can only be given a referential interpretation; these QCs refer to some/all/each of the pairs of shoes in the domain of discourse.

- (63) a. sommige/alle paren schoenen  
           some/all pairs [of] shoes  
       b. elk paar schoenen  
           each pair [of] shoes

The examples in (40), repeated here as (64), show that the noun *paar* can also be preceded by a cardinal numeral, in which case the noun may appear either in its singular or in its plural form. In both cases the QC refers to exactly eight shoes, but the examples differ in the implication that the shoes make up four pairs: this is implied by (64b) but not by (64a). It is tempting to account for this difference by claiming that the noun *paar* is purely quantificational in (64a) and referential in (64b). However, if this is indeed the case, we must conclude that there is no general ban on using a cardinal numeral with purely quantificational nouns.

- (64) a. vier paar schoenen  
           four pair [of] shoes  
       b. vier paren schoenen  
           four pairs [of] shoes

Example (65) shows that measure nouns can be preceded by a quantifier. The use of an existential/universal quantifier, which triggers the package unit reading, gives rise to a slightly marked result. The distributive quantifier *elk* does not trigger this reading and gives rise to a perfectly acceptable result.

- (65) a. ?sommige/alle liters melk  
           some/all liters [of] milk  
       b. elke liter melk  
           each liter [of] milk

Most measure nouns preceded by a numeral can appear either in singular or plural form; see Section 4.1.1.3.1, sub I, for some exceptions. In the latter case, the quantifier noun is clearly used as a referential noun with a package unit reading: (66b) refers to four discrete quantities of milk of one liter each; in (66a), on the other hand, it refers to one quantity of milk, further specified as a quantity of four liters. This supports the suggestion above (64) that there is no general ban on using cardinal numerals with purely quantificational nouns.

- (66) a. vier liter melk  
           four liter [of] milk  
       b. vier liters melk  
           four liters [of] milk

For completeness' sake, observe that some  $N_1$ s are lexically restricted in the sense that they can only be used when a cardinal numeral is present. An example is given in (67). The  $N_1$  *man* must appear in its singular form.

- (67) vier man/\*mannen personeel  
       four man/men [of] personnel  
       'a staff consisting of four members'

### V. Attributive adjectives

On the basis of what we have seen so far, we may expect modification of  $N_1$  by means of an attributive modifier to be impossible in the case of purely quantificational nouns; attributive modifiers are used to restrict the set denoted by the modified noun, but purely quantificational nouns do not denote any such set. As shown in (68a), this expectation is indeed borne out. The remaining examples in (68) show that modification of the other  $N_1$ s is possible.

- (68) a. \*een klein paar fouten [QN]  
           a small couple [of] mistakes  
       b. een kleine kilo kaas [MN]  
           a small kilo [of] cheese  
           'nearly a kilo cheese'  
       c. een groot glas bier [ConN]  
           a big glass [of] beer  
       d. een groot stuk kaas [PartN]  
           a big piece [of] cheese  
       e. een grote groep studenten [ColN]  
           a big group [of] students

There are, however, various restrictions on the use of the attributive adjectives in constructions of this type. When we are dealing with a measure noun like *kilo*, the adjective modifying  $N_1$  must be one of the following sorts: it can be quantificational, as *veel* in (69a), have an adverbial meaning indicating approximation, such as *klein* in (69b), or have a "partitive" meaning, such as *half* and *heel* in (69c).

- (69) a. Er stroomden vele liters wijn.  
           there streamed many liters [of] wine  
           'Many liters of wine were served.'  
       b. een kleine liter wijn  
           a small liter [of] wine  
           'nearly a liter of wine'  
       c. een halve/hele liter wijn  
           a half/whole liter [of] wine

Container, part and collective nouns exhibit similar restrictions: the examples in (70) to (72) show that quantificational, size and “partitive” adjectives are possible, whereas adjectives denoting other properties give rise to marked results.

- |         |   |     |   |
|---------|---|-----|---|
| (70) a. | talrijke glazen bier<br>numerous glasses [of] beer              | a'. | ?een versierd glas bier<br>a decorated glass [of] beer                  |
| b.      | een grote kist sinaasappelen<br>a big box [of] oranges          | b'. | ?een houten kist sinaasappelen<br>a wooden box [of] oranges             |
| (71) a. | een halve reep chocola<br>a half bar [of] chocolate             | a'. | ?een gestolen reep chocola<br>a stolen bar [of] chocolate               |
| b.      | een klein stuk krijt<br>a small piece [of] chalk                | b'. | ?een gebroken stuk krijt<br>a broken piece [of] chalk                   |
| (72) a. | vele groepen studenten<br>many groups [of] students             | a'. | ?een verspreide groep studenten<br>a dispersed group [of] students      |
| b.      | een enorme vlucht kraanvogels<br>an enormous flight [of] cranes | b'. | ?een opgeschrikte vlucht kraanvogels<br>a frightened flight [of] cranes |

Recall from Section 4.1.1.2.2, sub II, that an attributive adjective preceding  $N_1$  can be used to modify  $N_2$ . Thus, all types of attributive adjectives may precede these  $N_1$ s provided that they can be construed with  $N_2$ : an example like *een smakelijk glas bier* ‘a tasty glass of beer’ is acceptable with the attributive adjective expressing a property of the  $N_2$  *bier* ‘beer’. An interesting case, about which we have little to say, is *geef me een nieuw glas bier* ‘give me a new glass of beer’: in this example the adjective *nieuw* ‘new’ is construed with  $N_1$ , but it does not attribute a property to the glass in question; it is rather interpreted as “another glass of beer”.

## VI. Summary

Table 3, which summarizes the findings of this section, shows that quantifier nouns can entertain far fewer syntagmatic relations than container, part and collective nouns. The latter can be preceded by all sorts of determiners, quantifiers and numerals, and do not exhibit special restrictions concerning attributive modification. The former, on the other hand, exhibit all kinds of restrictions: the element *een* preceding quantifier nouns may not be an indefinite article but must be something else, and definite determiners, quantifiers, numerals, possessive pronouns, and attributive modifiers do not occur at all; demonstrative pronouns may appear with some but not all quantifier nouns. Measure nouns again show a more mixed behavior: the notation —/+ indicates that the element in question can be used when the noun has a referential, but not when it has a quantificational interpretation. The findings in Table 3 are consistent with the classification given in (38), which groups the five noun types into the three supercategories in the top row.

Table 3: *Determiners and quantificational modifiers of N<sub>1</sub>*

	QUANTIFICATIONAL	MIXED	REFERENTIAL		
	QN	MN	CONN	PARTN	COLN
indefinite article	—	+	+	+	+
definite article	—	—/+	+	+	+
demonstrative	—/+	—/+	+	+	+
possessive	—	—/+	+	+	+
quantifier	—	—/+	+	+	+
cardinal numeral	—	+	+	+	+
attributive modifier	—	+	+	+	+

VII. *A note on recursive QCs*

A final piece of evidence in favor of the classification in (38) comes from recursive QCs, that is, QCs that embed some other QC. The examples given so far always contain two nouns, but it is possible to have more complex cases in which a QC is embedded in a larger QC, which results in sequences of three or more nouns. Given the fact that the second part of a QC must denote a set, it is predicted that the embedded QC cannot be purely quantificational. The examples in (73) suggest that this expectation is indeed borne out. In these examples, N<sub>1</sub> is a quantifier noun and it can be followed by any QC as long as the N<sub>1</sub> of this QC is not a quantifier noun itself.

- (73) a. \*een hoop aantal mensen  
a lot [of] number [of] people  
b. een aantal kilo/kilo's kaas  
a number [of] kilo/kilos [of] cheese  
c. een aantal dozen lucifers  
a number [of] boxes [of] matches  
d. een aantal repen chocola  
a number [of] bars [of] chocolate  
e. een aantal groepen studenten  
a number [of] groups [of] students

A problem for the claim that quantifier nouns cannot be used as the N<sub>1</sub> of an embedded QC is that the measure noun *kilo* in (73b) may appear either in its singular or in its plural form; since we argued above that the measure noun is purely quantification in the former case, it seems that QCs headed by a purely quantificational N<sub>1</sub> can be embedded within a larger QC after all. However, an alternative analysis seems possible. Consider the examples in (74a&b). We have seen that these examples differ in that (74a) simply refers to four kilos of cheese without any implication concerning the package units, whereas (74b) implies that we are dealing with four separate package units of one kilo each. This suggests that the structures of the two examples differ as indicated in the primed examples: in (74a) the numeral *vier* can be considered part of a complex quantifier *vier kilo*, whereas in (74b) it modifies the QC *kilo's kaas*.

- (74) a. vier kilo kaas  
four kilo [of] cheese  
a'. [[vier kilo] kaas]
- b. vier kilo's kaas  
four kilos [of] cheese  
b'. [vier [kilo's kaas]]

It seems that a similar analysis can be given to the examples in (73b), repeated below as (75): in (75a), the complex quantifier *een aantal kilo* functions as  $N_1$  with *kaas* functioning as  $N_2$ ; in (75b), on the other hand, *aantal* functions as  $N_1$  and *kilo's kaas* is an embedded QC.

- (75) a. een aantal kilo kaas  
a number [of] kilo [of] cheese  
a'. [[een aantal kilo] kaas]
- b. een aantal kilo's kaas  
a number [of] kilos [of] cheese  
b'. [een aantal [kilo's kaas]]

Independent evidence in favor of the analyses in the primed examples can be found in the examples in (76), which involve °quantitative *er*. The contrast between the examples can be accounted for by the fact that the elided part corresponds to a single constituent in (76b), but not in (76a).

- (76) a. ??Jan heeft [[vier kilo] [kaas]] en ik heb er [vijf [e]].  
Jan has four kilo [of] cheese and I have ER five
- b. Jan heeft [vier [kilo's kaas]] en ik heb er [vijf [e]].  
Jan has four kilos [of] cheese and I have ER five

The other examples in (73) are ambiguous in the same way. We will show this for container nouns. Consider the examples in (77). In (77a) the QC just indicates an amount of sugar, and we are therefore dealing with a complex quantifier *vier/een paar zakken* 'four/a couple of bags', as indicated in (77a'). In (77b), on the other hand, we are dealing with a number of bags that contain sugar, and the phrase *zakken suiker* is therefore a QC embedded in a larger QC, as indicated in (77b').

- (77) a. Er zitten vier/een paar zakken suiker in de marmelade.  
there sits four/a couple [of] sacks [of] sugar in the marmalade  
'The marmalade contains four/a couple of bags of sugar.'  
a'. [[vier/een paar zakken] suiker]
- b. Er staan vier/een paar zakken suiker op tafel.  
there stand four/a couple [of] bags [of] sugar on the table  
'Four/a couple of bags of sugar stand on the table.'  
b'. [vier/een paar [zakken suiker]]

From this we can conclude that (73b) does not provide evidence against the claim that QCs headed by a purely quantificational  $N_1$  cannot be embedded within a larger QC. The apparent counterexample *een aantal kilo suiker* can be analyzed as involving a complex quantifier and therefore need not be considered a recursive QC. Note that the fact that (73a) does not allow an interpretation involving a complex quantifier is consistent with the fact that quantifier nouns cannot be preceded by a numeral either: *\*vier hoop/hopen mensen* 'four lots of people'.

In (78) we give examples of recursive QCs, in which  $N_1$  is a measure noun. We find the same contrast as in (73): whereas container, part and collective nouns can be used as the  $N_1$  of an embedded QC, quantifier nouns cannot. The sign "\$"



indicates that the examples in (73c&e) are weird due to our knowledge of the world: boxes of matches normally do not come in units of a kilo, and it is not common to add up collections of entities until they have a certain weight. The main difference between the examples in (73) and (78) concerns the measure nouns: a measure noun cannot be followed by another measure noun in the singular. This supports our earlier claim that a QC headed by a purely quantificational  $N_1$  cannot be embedded in a larger QC: the unacceptability of (78b) is due to the fact that there is no complex quantifier *\*een kilo ons*. Example (78b'), on the other hand, seems acceptable despite being marked due to the fact that it is difficult to conceptualize and the intended meaning can be more readily expressed by means of the phrase *tien onsjes kaas* 'the ounces of cheese'.

- (78) a. *\*een kilo hoop kaas*  
       a kilo [of] lot [of] cheese  
   b. *\*een kilo ons kaas*  
       a kilo [of] ounce [of] cheese  
   b'. *?een kilo onsjes kaas*  
       a kilo [of] ounces [of] cheese  
   c. *?een kilo doosjes lucifers*  
       a kilo [of] boxes [of] matches  
   d. *een kilo plakjes kaas*  
       a kilo [of] slices [of] cheese  
   e. *?een kilo kolonies mieren*  
       a kilo [of] colonies [of] ants

In (79) to (81), we give similar examples for container, part and collective nouns. The examples in (79) show that container nouns behave just like measure nouns. Example (79e) may again be weird for reasons concerning our knowledge of the world, but seems otherwise completely well-formed.

- (79) a. *\*een doos hoop kaas*  
       a box [of] lot [of] cheese  
   b. *\*een doos kilo kaas*  
       a box [of] kilo [of] cheese  
   b'. *?een doos kilo's kaas*  
       a box [of] kilos [of] cheese  
   c. *een doos pakjes lucifers*  
       a box [of] boxes [of] matches  
   d. *een schaal plakjes kaas*  
       a dish [of] slices [of] cheese  
   e. *?een vrachtwagen kolonies mieren*  
       a truck [of] colonies [of] ants

The part nouns in (80) cannot readily be used as the  $N_1$  of a recursive QC. This is, of course, due to the fact that they can only be followed by a non-count noun while the referential  $N_1$ s heading the embedded QCs are count nouns.

- (80) a. \*een stuk aantal chocola  
           a piece [of] number [of] chocolate  
       b. \*een stuk kilo chocola  
           a piece [of] kilo [of] chocolate  
       b'. \*een stuk kilo's chocola  
           a piece [of] kilos [of] chocolate  
       c. \*een stuk doos chocola  
           a piece [of] box [of] chocolate  
       d. \*<sup>?</sup>een stuk reep chocola  
           a piece [of] bar [of] chocolate  
       e. \*een stuk groep eenden  
           a piece [of] group [of] ducks

The examples in (81) show that the collective nouns behave just like the measure and container nouns.

- (81) a. \*een verzameling boel thee  
           a collection [of] lot [of] tea  
       b. \*een verzameling ons thee  
           a collection [of] ounce [of] tea  
       b'. een verzameling onsjes thee  
           a collection [of] ounces [of] tea  
       c. een verzameling zakjes suiker  
           a collection [of] bags [of] sugar  
       d. een verzameling repen chocola  
           a collection [of] bars [of] chocolate  
       e. een verzameling series postzegels  
           a collection [of] series [of] stamps

#### 4.1.1.3.3. *Some semantic properties*

This section discusses some of the semantic properties of the different types of  $N_1$ s, focusing on their quantificational meaning. We will see that quantifier nouns are quite similar to cardinal numerals in various respects.

##### *1. The quantificational force of $N_1$ s*

In the previous sections it has repeatedly been claimed that all  $N_1$ s are quantificational in the sense that they indicate a certain amount or quantity of the denotation of  $N_2$ . In this respect, they behave like cardinal numerals or quantifying adjectives like *veel* 'many/much'. As is shown in (82), the latter elements can be questioned by means of the *wh*-word *hoeveel* 'how many/much'. If  $N_1$ s indeed have quantifier-like properties comparable to cardinal numerals or quantifying adjectives, we expect them to yield felicitous answers to the question in (82a) as well. Example (82b') shows that this indeed holds for quantifier nouns.

- (82) a. Hoeveel boeken heb je gelezen?  
 how.many books have you read  
 b. drie/veel  
 three/many  
 b'. een boel/paar  
 a lot/couple

In (83), it is shown that the same thing holds for the measure noun *liter* 'liter' and the container noun *glas* 'glass'. Note that the N<sub>1</sub>s can undergo pluralization and diminutivization, and can be preceded by a cardinal numeral. This clearly shows that we are dealing with referential nouns.

- (83) a. Hoeveel bier heb je gedronken?  
 how.much beer have you drunk  
 'How much beer did you drink?'  
 b. Een/één liter/litertje.                      b'. Een/één glas/glaasje.  
 a/one liter/liter<sub>dim</sub>                              a/one glass/glass<sub>dim</sub>  
 c. Twee liter/?liters/litertjes.              c'. twee glazen/glaasjes.  
 two liter/liters/liters<sub>dim</sub>                      two glasses/glasses<sub>dim</sub>

Similarly, part and collective nouns in (84) and (85) can be used as answers to questions involving *hoeveel*, although there seems to be an additional restriction: when the part noun *plak* 'slice' or the collective noun *groep* 'group' is preceded by the indefinite article *een* 'a', as in (84b) and (85b), the size of the slice/group must be indicated by means of diminutivization or addition of an attributive adjective like *dik* 'big' or *groot* 'big'; this is not needed when these nouns are preceded by a numeral, as in (84c) and (85c).

- (84) a. Hoeveel cake heb je gegeten?  
 how.much cake have you eaten  
 'How much cake did you eat?'  
 b. Een plakje/?<sup>9</sup>(dikke) plak.  
 a slice<sub>dim</sub>/big slice  
 c. Eén plak/twee plakken.  
 one slice/two slices  
 (85) a. Hoeveel toeristen heb je rondgeleid?  
 how.many tourists have you prt.-guided  
 b. een groepje/?<sup>9</sup>(grote) groep  
 a group<sub>dim</sub>/big group  
 c. Eén groep/twee groepen.  
 one group/two groups

## II. Weak versus strong quantification constructions

QCs can be either °weak or strong noun phrases. On the weak reading, exemplified in the primeless examples in (86), these noun phrases get a nonspecific indefinite interpretation, that is, they simply refer to a set of new discourse entities. On the strong reading, exemplified in the primed examples, these noun phrases get a partitive interpretation, that is, they refer to a subset of a larger set of entities

already given in the domain of discourse. The primed and primeless examples in (86a&d) show that whereas the indefinite article is always possible on the weak reading of QCs, it sometimes gives rise to a degraded result on the strong reading.

- (86) a. Er zijn een aantal studenten verdwenen. [QN]  
 there are a number [of] students disappeared  
 'A number of students have disappeared.'
- a'. Een aantal studenten zijn verdwenen.  
 a number [of] students are disappeared  
 'A number of the students have disappeared.'
- b. Er is twee kilo vlees verdwenen. [MN]  
 there is two kilo [of] meat disappeared  
 'Two kilo of meat has disappeared.'
- b'. Twee kilo vlees is verdwenen.  
 two kilo [of] meat is disappeared  
 'Two kilo of the meat has disappeared.'
- c. Er zijn twee stukken/dozen chocola verdwenen. [PartN/ConN]  
 there are two pieces/boxes [of] chocolate disappeared  
 'Two pieces/boxes of chocolate have disappeared.'
- c'. Twee stukken/dozen chocola zijn verdwenen.  
 two pieces/boxes [of] chocolate are disappeared  
 'Two pieces/boxes of the chocolate have disappeared.'
- d. Er is één/een kudde schapen geslacht. [ColN]  
 there is one/a flock [of] sheep slaughtered  
 'A flock of sheep has been slaughtered.'
- d'. Eén/\*Een kudde schapen is geslacht.  
 one/a flock [of] sheep is slaughtered  
 'One flock of the sheep has been slaughtered.'

### III. Definite and indefinite $N_{1s}$

All  $N_{1s}$  indicate a certain amount or quantity. The difference between quantifier nouns and the other types of  $N_{1s}$  is that quantifier nouns indicate an indefinite amount or quantity, whereas the other types indicate an often conventionally or contextually determined definite amount or quantity. The difference is brought out clearly in constructions with the preposition *per* 'per'. This preposition can be followed by a cardinal numeral like *vier* 'four' but not by a quantifier like *veel* 'many/much', which indicates some indefinite amount or quantity.

- (87) a. per vier  
 per four  
 b. \*per veel  
 per many/much

The examples in (88) show that the same difference can be found between quantifier nouns like *boel* and *hoop*, which indicate an indefinite amount of quantities, and the other  $N_{1s}$ , which indicate a (conventionally or contextually determined) amount or quantity.

(89) a. per twee kilo/\*kilo's  
per two kilo<sub>sg/pl</sub>  
b. ??per twee koppen  
per two cups  
c. ??per twee plakken  
per two slices  
d. \*?per twee koppels  
per two couples

Section 4.1.1.3.3 has shown that N<sub>1</sub>s and cardinal numerals share a number of semantic properties. Therefore, it seems useful to compare the two types of element in other respects as well. This section shows that they both license so-called °quantitative *er* and exhibit similar behavior under modification and coordination.

If N<sub>1</sub>s are quantificational, they may be expected to co-occur with °quantitative *er*. The primeless examples in (90) show, however, that this expectation is borne out for the quantifier and the measure nouns only. Note that the measure noun in (90b) must be followed by the sequence *of + numeral*, which is probably due to the fact that this makes the quantifier less definite. Given the requirement that the phonetically empty noun is [+COUNT], it does not come as a surprise that measure nouns like *liter* give rise to a degraded result due to the fact that they normally combine with non-count N<sub>2</sub>s. Given that part nouns also combine with non-count N<sub>2</sub>s, we might in principle give a similar account for the unacceptability of (90d), but the unacceptability of (90c&e) shows that there is more involved than simply a count/non-count distinction: the ungrammaticality of (90c-e) is clearly related to the referential status of the N<sub>1</sub>s.

- (90) a. Ik heb er nog [een paar/boel [e]]. [QN]  
I have ER still a couple/lot  
'I have still got a couple of them.'

- b. Ik heb er nog [een kilo \*(of twee) [e]]. [MN]  
 I have ER still a kilo or two  
 'I have still got about two kilos of it.'
- b'. \*Ik heb er nog [een liter \*(of twee) [e]].  
 I have ER still a liter or two
- c. \*Ik heb er nog [een doos (of twee) [e]]. [ConN]  
 I have ER still a box or two
- d. \*Ik heb er nog [een reep (of twee) [e]]. [PartN]  
 I have ER still a bar or two
- e. \*Ik heb er nog [een kudde (of twee) [e]]. [ColN]  
 I have ER still a herd or two

Note that the intended contentions of the ungrammatical examples can be expressed by means of the examples in (91), in which  $N_2$  is simply left implicit. This is impossible with quantifier nouns like *paar*, which is typically preceded by the unstressed indefinite article *een* 'a'; the noun *paar* in (90a) can only be interpreted as a collective noun, which is typically preceded by a numeral in this context.

- (91) a. Ik heb nog één/\*'een paar. [QN]  
 I have still one/a couple
- b. Ik heb nog twee liter(s). [MN]  
 I have still two liter
- c. Ik heb nog twee dozen. [ConN]  
 I have still two boxes
- d. Ik heb nog twee repen. [PartN]  
 I have still two bars
- e. Ik heb nog twee kuddes. [ColN]  
 I have still two herds

Example (92a) shows that QCs headed by the quantifier noun *aantal* may trigger either singular or plural agreement on the finite verb (cf. Section 4.1.1.2.1), and the same thing is shown for the measure noun *kilo* in (92b). The primed counterparts with quantitative *er*, on the other hand, are compatible with plural agreement only, which shows that in these constructions the verb agrees with the phonetically empty  $N_2$  that we postulated for these constructions. We added example (92c) to show that in constructions without quantitative *er* agreement is always triggered by  $N_1$ .

- (92) a. Daar lopen/loopt nog een aantal studenten.  
 there walk<sub>pl/sg</sub> still a couple [of] students
- a'. Daar lopen/\*loopt er nog [een aantal [e]].  
 there walk<sub>pl/sg</sub> ER still a couple
- b. Daar liggen/ligt nog een kilo of twee appels.  
 there lie<sub>pl/sg</sub> still a kilo or two [of] apples
- b'. Daar liggen/\*ligt er nog [een kilo of twee [e]].  
 there lie<sub>pl/sg</sub> ER still a kilo or two
- c. Daar ligt/\*liggen nog een kilo of twee.  
 there lie<sub>pl/sg</sub> still a kilo or two

- (95) a. \*minstens/hoogstens/bijna/ongeveer/precies een boel/paar studenten  
at.least/at.most/nearly/about/precisely a lot couple [of] students  
b. minstens/hoogstens/bijna/ongeveer/precies een kilo vuurwerk  
at.least/at.most/nearly/about/precisely a kilo [of] fireworks

c.	minstens/hoochstens/bijna/ongeveer/precies	een emmer	appels
	at.least/at.most/nearly/about/precisely	a bucket [of]	apples
d.	minstens/hoochstens/bijna/ongeveer/precies	een plak	koek
	at.least/at.most/nearly/about/precisely	a slice [of]	cake
e.	minstens/hoochstens/bijna/ongeveer/precies	een team	voetballers
	at.least/at.most/nearly/about/precisely	a team [of]	footballers
e'.	*minstens/hoochstens/bijna/ongeveer/precies	een kudde	schapen
	at.least/at.most/nearly/about/precisely	a flock [of]	sheep

The fact that the modifiers in (95) cannot immediately precede  $N_1$ , but must precede *een*, suggests that it is the full phrase *een N<sub>1</sub>* that acts as a quantifier. This will be clear from the fact that in examples like (96a) the modifier must be adjacent to the modified numeral. Finally, it can be noted that in cases in which  $N_1$  is preceded by a numeral, it is the numeral and not  $N_1$  that is modified. This accounts for the fact that, in contrast to (95e'), (96b) is acceptable.

- (96) a. <\*bijna> de <bijna> tien studenten  
           nearly the           ten students  
       b. minstens/hoochstens/bijna/ongeveer/precies tien kuddes   schapen  
           at.least/at.most/nearly/about/precisely   ten flocks [of] sheep

### III. Scope and coordination

The examples in (97) show that cardinal numerals and quantifiers may take scope over nominal phrases of different sizes: in the primeless examples, their scope is restricted to one conjunct, whereas in the primed examples they may have both conjuncts in their scope.

- (97) a. [[vier mannen] en [vier vrouwen]]  
           four men       and   four/many women  
       a'. [vier [mannen en vrouwen]]  
           four men and women  
       b. [[veel mannen] en [veel vrouwen]]  
           four men       and   four/many women  
       b'. [veel [mannen en vrouwen]]  
           many men and women

The examples differ in the scope of the attributive modifier/numeral: in the primeless examples the numeral/quantifier has scope only over the noun immediately following it, whereas in the primed examples it has scope over both nouns. This difference is clearest with the numeral *vier* 'four' in the (a)-examples: (97a) refers to a set of people with cardinality 8, whereas the phrase in (97b') refers to a set of people with cardinality 4. The difference is less clear with the quantifier *veel* 'may' in the (b)-examples, due to the fact that (97b) implies (97b'). However, the same does not hold in the other direction: in a situation with 90 women and 4 men, (97b') might be appropriate whereas (97b) is not.

The quantifier noun *hoop* has the same property as the quantifier *veel*: whereas (98a) implies (98b), the implication does not hold the other way round. This shows



that in (98b) the quantifier noun must also be assumed to take scope over the conjoined phrase *dieven en inbrekers*.

- (98) a. [[een hoop dieven] en [een hoop inbrekers]]  
           a lot [of] thieves and a lot [of] burglars  
       b. [een hoop [dieven en inbrekers]]  
           a lot [of] thieves and burglars

Measure nouns, on the other hand, act like cardinal numerals: the full noun phrase in (99a) refers to a total quantity of two kilos of potatoes and vegetables, whereas in (99a') it refers to a total amount of just one kilo. More or less the same thing holds for the container noun *glas* 'glass' in (99b&b'): (99b) refers to two glasses, one filled with gin and one with tonic, whereas (99b') refers to a single glass filled with a mixture of gin and tonic. The collective nouns also behave in this way, but this will go unillustrated here. Example (99c) show, finally, that part nouns like *stuk* 'piece' cannot take scope over both conjuncts: this is due to the fact that QC with these nouns must refer to a "homogeneous" entity.

- (99) a. [[een kilo aardappelen] en [een kilo groente]]  
           a kilo [of] potatoes and a kilo [of] vegetables  
       a'. [een kilo [aardappelen en groente]]  
           a kilo [of] potatoes and vegetables  
       b. [[een glas [gin]] en [een glas [tonic]]]  
           a glass [of] gin and a glass [of] tonic  
       b'. [een glas [gin en tonic]]  
           a glass [of] gin and tonic  
       c. een stuk koek en \*(een stuk) chocola  
           a piece [of] biscuit and a piece [of] chocolate

#### IV. Conclusion

This section has compared the three types of  $N_1$ s with numerals and quantifiers. Quantifier nouns have been shown to pattern with quantifiers. Container, part and collective nouns, on the other hand, rather pattern with cardinal numerals, notwithstanding the fact that the latter, but not the former, license quantitative *er*. Measure nouns again exhibit ambiguous behavior.

##### 4.1.1.4. The projection of $N_2$

This section discusses the projection headed by  $N_2$ . It will be argued that this projection is not a DP, but a phrase that is somewhat smaller.

##### I. Determiners

One reason to assume that the phrase headed by  $N_2$  is not a DP is that it can never be preceded by an article, a demonstrative or a possessive pronoun. This is shown in (100) both for count and for non-count nouns. By way of contrast, the primed examples give the corresponding partitive constructions, in which the projection of  $N_2$  does act as a full DP; see Section 4.1.1.6 for a discussion of this construction.

- (100) a. \*een boel de/die/mijn boeken [count noun]  
           a lot [of] the/those/my books  
       a'. een boel van de/die/mijn boeken  
           a lot of the/those/my books  
       b. \*een glas de/deze/zijn cognac [non-count noun]  
           a glass [of] the/this/his cognac  
       b'. een glas van de/deze/je cognac  
           a glass of the/this/your cognac

One might suggest that the ungrammaticality of the primeless examples is due to the fact that the determiners make the projection headed by  $N_2$  definite. It must be noted, however, that an indefinite article cannot be used either, as is shown by (101a); compare this QC with the partitive construction in (101b), in which the indefinite article must be expressed.

- (101) a. Ik kreeg van Peter een glas (\*een) uitgelezen cognac.  
           I got from Peter a glass [of] an exquisite cognac  
       b. Ik kreeg van Peter een glas van \*(een) uitgelezen cognac.  
           I got from Peter a glass of an exquisite cognac

## II. Proper nouns and pronouns

Another reason for assuming that  $N_2$  does not head a DP is that substituting a pronoun for the projection of  $N_2$  yields an unacceptable result. The ungrammaticality of (102a&b) is not conclusive since we are dealing with definite pronouns. Example (102c) shows, however, that existential quantifiers are excluded as well. By way of comparison, the primed examples give the corresponding partitive constructions; note that *van het/ze* 'of it/them' is not possible, but this is due to the general rule that replaces the inanimate pronouns *het/ze* 'it/them' with the °R-pronoun *er* in this syntactic context.

- (102) a. \*een fles het a'. een fles ervan  
           a bottle [of] it a bottle of.it  
       b. \*een doos ze b'. een doos ervan  
           a box [of] them a box of.it  
       c. \*een fles iets (lekkers) c'. een fles van iets (lekkers)  
           a bottle [of] something tasty a bottle of something tasty

## III. Complementation and modification

Although the examples above support the idea that  $N_2$  does not head a DP, we cannot conclude that  $N_2$  is a bare noun. This is clear from the fact that it may take an argument, as is shown for the relational noun *vriendjes* 'friends' in (103a). Further,  $N_2$  can be modified by all sorts of modifiers: an attributive adjective in (103b), an appositive phrase in (103c), an °adjunct PP in (103d), and a restrictive relative clause in (103e).

- (103) a. een hoop vriendjes van Jan  
           a lot [of] friends of Jan  
       b. een liter warme melk  
           a liter [of] warm milk  
       c. een glas melk direct van de koe  
           a glass [of] milk straight from the cow  
       d. een stuk appeltaart met slagroom  
           a piece [of] apple.pie with cream  
       e. een groep studenten die demonstreren  
           a group [of] students who demonstrate

For completeness' sake, note that  $N_2$  can be modified by an adjective in the positive or the comparative form but not an adjective in the superlative form. This might be due to the fact that noun phrases containing a superlative are definite: *de/\*een aardigste student* 'the/a kindest student'. Finally, note that a pseudo-superlative like *alleraardigste* could be used, but these do not necessarily trigger a definite interpretation.

- (104) a. een groep aardige studenten  
           a group [of] nice students  
       b. een groep (nog) aardigere studenten  
           a group [of] even nicer students  
       c. \*een groep aardigste studenten  
           a group [of] nicest students

#### IV. Numerals and quantifiers

Cardinal numerals and quantifiers cannot precede  $N_2$ . This, however, has no bearing on what the size of the projection of  $N_2$  is, given that a plausible explanation for the impossibility of (105) can be found in the fact that they are in the scope of the  $N_1$ , which also has quantifying force; cf. *\*veel vijf studenten* 'many five students'.

- (105) \*een paar vijf/veel studenten  
           a couple [of] five/many students

#### V. Initial coordination

The claim that  $N_2$  heads a projection that is somewhat smaller than a DP can also be supported by evidence involving initial coordination, that is, coordination by means of discontinuous coordinators like *of... of...* 'either ... or ...' and *zowel... als...* 'both ... and ...'. In the primeless examples in (106) the two conjuncts each include an article so we may safely conclude that we are dealing with full DPs, and we see that the result of initial coordination is fine; in the primed examples, on the other hand, we are dealing with the smaller phrases *oude mannen* 'old men' and *oude vrouwen* 'old women', and the result of initial coordination is unacceptable.

- (106) a. of de oude mannen of de oude vrouwen  
           either the old men or the old women  
       a'. \*de of oude mannen of oude vrouwen

- b.   zowel de oude mannen als de oude vrouwen  
       both the old men and the old women  
 b'. \*de zowel [oude mannen] als [oude vrouwen]

When  $N_2$ s head a phrase that is smaller than a full noun phrase, we predict that initial coordination of phrases headed by such nouns is impossible. As is shown in the primed examples in (107) for quantifier and collective nouns by means of *zowel ... als ...*, this expectation is indeed borne out. Note that it is not coordination itself that causes the ungrammaticality, since the primeless examples with the conjunction *en* 'and' are fully acceptable.

- (107) a.   een paar       oude mannen en oude vrouwen  
           a couple [of] old man and old women  
       a'. \*een paar       zowel oude mannen als oude vrouwen  
           a couple [of] both old men and old women  
       b.   een groep   Engelse jongens en Franse meisjes  
           a group [of] English boys and French girls  
       b'. \*een groep   zowel Engelse jongens als Franse meisjes  
           a group [of] both English boys and French girls

#### VI. Movement

The primeless examples in (108) show that the projection headed by  $N_2$  can never be moved independently from  $N_1$ ; the noun phrase consisting of  $N_1$  and  $N_2$  cannot be split. The primed examples show that the same thing holds for numerals and quantifiers: Standard Dutch does not allow this so-called split topicalization construction. That the judgments on the primeless and the primed examples are related is clear from the fact that those dialects that do allow the primeless examples also allow the split patterns in the primed examples. We refer the reader to Coppen (1991), Vos (1999), and Van Hoof (2006) for a discussion of split topicalization.

- (108) a. \*Pinguïns heb ik [<sub>NP</sub> een heleboel [e]] gezien aan de Zuidpool.  
           penguins have I a lot seen at the South.Pole  
       a'. \*Pinguïns heb ik [<sub>NP</sub> drie [e]] gezien aan de Zuidpool.  
           penguins have I three seen at the South.Pole  
       b. \*Bramen heb ik [<sub>NP</sub> drie emmers e ] geplukt.  
           blackberries have I three buckets picked  
       b'. \*Bramen heb ik [<sub>NP</sub> veel [e]] geplukt.  
           blackberries have I many picked

#### VII. Quantitative *er*

That the phrase headed by  $N_2$  and the nominal projection following a numeral sometimes exhibit similar behavior is also clear from the fact already discussed in Section 4.1.1.3.4, sub I, that both can be replaced by quantitative *er* when  $N_1$  is a quantifier or measure noun. This again shows that the projection of  $N_2$  is smaller than DP, given that DPs cannot be replaced in this way.

- (109) a. Ik heb er aan de Zuidpool [<sub>NP</sub> een heleboel [e]] gezien.  
 I have ER at the South.Pole a lot seen  
 b. Ik heb er aan de Zuidpool [<sub>NP</sub> drie [e]] gezien.  
 I have ER at the South.Pole three seen

#### 4.1.1.5. Modification of quantificational binominal constructions

This section investigates modification of the nouns in a QC. We will discuss attributive adjectives, PP-modifiers and relative clauses.

##### I. Attributive adjectives

Section 4.1.1.3.2, sub I, has shown that  $N_1$  can only be modified by a limited set of attributive adjectives, namely those with a quantificational meaning or indicating size. In other cases, attributive adjectives preceding  $N_1$  actually modify  $N_2$  (see Section 4.1.1.2.2, sub II, for details), despite the fact that in these cases gender and number agreement is always with  $N_1$ , not  $N_2$ .

- (110) a. een lekker/\*lekkere glas wijn  
 a tasty glass [of] wine  
 b. een lekker/\*lekkere stuk kaas  
 a tasty piece [of] cheese

In (110), the singular neuter noun *glas/stuk* requires that the attributive *-e* ending be absent, whereas agreement between the adjective and the non-neuter substance noun  $N_2$  would have required presence of the *-e* ending. This is clear from the fact, illustrated in (111), that the *-e* ending must be present when the adjective follows  $N_1$ . This shows, again, that if  $N_2$  functions as the semantic head of the QC, this does not imply that it also functions as the syntactic head.

- (111) a. een glas lekkere wijn  
 a glass [of] tasty wine  
 b. een stuk lekkere kaas  
 a piece [of] tasty cheese

The attributive inflection on the adjective *lekker* in (110) is sensitive to the number and definiteness feature of the full binominal phrase; when the singular  $N_1$  is replaced by a plural one, or when the indefinite article *een* is replaced by the definite article *het*, the adjective must have the *-e* ending. This is shown for (110a) in (112): note that we replaced the non-neuter  $N_2$  *wijn* by the neuter  $N_2$  *bier* in order to block interference of the gender feature of this noun.

- (112) a. vier lekkere/\*lekker glazen bier  
 four tasty glasses [of] beer  
 b. het lekkere/\*lekker glas beer  
 the tasty glass [of] beer

When the adjective immediately precedes  $N_2$ , on the other hand, the adjective is not sensitive to the number and definiteness feature of the full binominal phrase. This is shown in (113), where the adjective agrees with the neuter substance noun in all

cases, although it must be noted that, for some speakers, examples (113b&c) are somewhat marked.

- (113) a. een glas lekker/\*lekkere bier  
a glass [of] tasty beer  
b. vier glazen <sup>?</sup>lekker/\*lekkere bier  
four glasses [of] tasty beer  
c. het glas <sup>?</sup>lekker/\*lekkere bier  
the glass [of] tasty beer

Attributive set-denoting adjectives modifying  $N_2$  can only precede  $N_1$  when they are set-denoting, that is, adjectives that normally can also occur as the predicate in a copular construction. Placing an adjective that does not belong to this group in front of  $N_1$  normally gives rise to a degraded result.

- (114) a. een groep Amerikaanse toeristen  
a group [of] American tourists  
a'. <sup>??</sup>een Amerikaanse groep toeristen  
b'. een groep vermeende misdadigers  
a group [of] alleged criminals  
b'. <sup>\*?</sup>een vermeende groep misdadigers

Furthermore, the attributively used set-denoting adjectives must denote a property of  $N_2$ ; in cases like (115), where the adjective has a classifying function instead, the adjective cannot precede  $N_1$  either.

- (115) a. <sup>#</sup>een wit/rood glas wijn  
a white/red glass [of] wine  
a. een glas witte/rode wijn  
a glass [of] white/red wine  
b. <sup>#</sup>een vervalste doos diamanten  
a forged box [of] diamonds  
b'. een doos vervalste diamanten  
a box [of] forged diamonds

Finally, it should not be possible to construe the attributively used adjective with  $N_1$ : in examples like (116a) the construal of the adjective with  $N_2$  is blocked by the fact that it can also express a property of  $N_1$ ; in order to modify  $N_2$  the adjective must occur after  $N_1$ , as in (116b).

- (116) a. een grote doos eieren  
a big box [of] eggs  
'a big box with eggs'  
b. een doos grote eieren  
a box [of] big eggs  
'a box with big eggs'

*II. Prepositional phrases*

Modifying PPs never intervene between  $N_1$  and  $N_2$ , regardless of whether it is  $N_1$  or  $N_2$  that is modified. First, consider the examples in (117): the PPs *met een deksel* ‘with a lid’ and *met statiegeld* ‘with deposit money’ clearly belong to the container nouns *doos* and *krat* (which is also clear from the fact that  $N_2$  can be dropped), but nevertheless they follow  $N_2$ . This fact that the PP cannot be placed between  $N_1$  and  $N_2$  suggests that the PP actually modifies a phrase containing both  $N_1$  and  $N_2$ , not just  $N_1$ . If this is indeed correct, the structure of these noun phrases is as indicated in the primed examples.

- (117) a. een doos (sigaren) met een deksel  
           a box [of] cigars with a lid  
       a'. [een [[doos sigaren] met een deksel]]  
       b. een krat (bier) met statiegeld  
           a crate [of] beer with deposit  
       b'. [een [[krat bier] met statiegeld]]

In the examples in (117), the referential meaning of the  $N_1$ s is highlighted at the expense of their quantificational force; (117a), for example, does not refer to a quantity of cigars but simply to a box containing cigars; the construction is more or less synonymous with *een doos met sigaren* ‘a box with cigars’. Consequently it is  $N_1$ , and not  $N_2$ , that acts as the semantic head of the examples in (117). This also clear from the fact that examples like (118), where the verb forces a reading in which  $N_2$  acts as the semantic head of the QC, are semantically anomalous when a PP-modifier of  $N_1$  is present.

- (118) a. Jan heeft gisteren een doos sigaren (<sup>S</sup>met een deksel) gerookt.  
           Jan has yesterday a box [of] cigars with a lid smoked  
       b. Ik heb gisteren een krat bier (<sup>S</sup>met statiegeld) opgedronken.  
           I have yesterday a crate [of] beer with deposit prt.-drunk

Since modification of  $N_1$  by means of a PP suppresses the quantificational meaning of  $N_1$ , we expect that purely quantificational nouns cannot be modified by a PP: that this is borne out is clear from the fact that the examples in (119) only allow an interpretation in which *uit die pot/fles* modifies  $N_2$ , which is clear from the fact that  $N_2$  cannot be dropped. However, given that we have seen that the PP may also modify the complete QC, one might want to argue that these examples can be ambiguous between the structures in the primed and doubly-primed example; we leave it to future research to discuss whether the examples in (119a&b) are really ambiguous in this way.

- (119) a. een aantal \*(bonen) uit die pot  
           a number [of] beans from that pot  
       a'. [een aantal [bonen uit die pot]]  
       a''. [een [[aantal bonen] uit die pot]]  
       b. een liter <sup>??</sup>(water) uit die fles  
           a liter water from that bottle  
       b'. [een liter [water uit die fles]]  
       b''. [een [[liter water] uit die fles]]

Whatever one wants to conclude about the structure of the examples in (119a&b), it seems that the analysis suggested in the doubly-primed examples is not available when  $N_1$  is referential. This can be made clear by the examples in (120). Despite its complexity, example (120a) seems acceptable: the PP *zonder pitten* must be interpreted as a modifier of  $N_2$ , and *met een deksel* as a modifier of  $N_1$ . Changing the order of the two PPs, as in (120a'), makes the construction completely unacceptable, which would immediately follow if we assume that the PP modifying  $N_2$  is embedded in the noun phrase headed by  $N_2$ , as indicated in (120b), but not if we assume that it is external to a phrase containing both  $N_1$  and  $N_2$ .

- (120) a. een kist sinaasappelen zonder pitten met een deksel  
           a box [of] oranges without pips with a lid  
       a'. \*een kistje sinaasappelen met een deksel zonder pitten  
       b. [een [[kist [sinaasappelen zonder pitten] met een deksel]]]

### III. Relative clauses

Just like PP-modifiers, relative clauses never intervene between  $N_1$  and  $N_2$ , regardless of whether it is  $N_1$  or  $N_2$  that is modified. Some examples are given in (121): the relative clauses in these examples can only be construed with the container nouns *doos* and *krat*, which is clear from the fact that  $N_1$  triggers singular agreement on the finite verb of the relative clause, and from the fact that  $N_2$  can be dropped. Nevertheless, the relative clauses must follow  $N_2$ . The fact that the relative clause cannot be placed between  $N_1$  and  $N_2$  suggests that it modifies a phrase containing both  $N_1$  and  $N_2$ , not just  $N_1$ . If this is correct, the structure of these noun phrases is as indicated in the primed examples.

- (121) a. een doos (sigaren) die kapot is  
           a box [of] cigars that broken is  
       a'. [een [[doos sigaren] die kapot is]]  
       b. een krat (bier) waarop statiegeld zit  
           a crate [of] beer where-on deposit.money sits  
           'a crate of beer on which deposit money must be paid'  
       b'. [een [[krat bier] waarop statiegeld zit]]

In (121), the referential meaning of the  $N_1$ s is highlighted at the expense of their quantificational force. This accounts for the fact that examples like (122), where the verb forces a reading in which  $N_2$  acts as the semantic head, are semantically anomalous when the relative clause is present.

- (122) a. Jan heeft gisteren een doos sigaren (<sup>§</sup>die kapot is) gerookt.  
           Jan has yesterday a box [of] cigars that broken is smoked  
       b. Jan heeft net een krat bier (<sup>§</sup>waarop statiegeld zit) opgedronken.  
           Jan has just a crate [of] beer where-on deposit.money sits prt.-drunk

Since modification of  $N_1$  by a relative clause suppresses the quantificational meaning of  $N_1$ , it is expected that purely quantificational nouns cannot be modified: that this is indeed correct is shown by the fact that the examples in (123) only allow an interpretation in which the relative clause modifies  $N_2$ . This is clear not only from the semantic interpretation, but also from the fact illustrated in (123a) that it is



N<sub>2</sub> that triggers number agreement on the finite verb in the relative clause, and from the fact illustrated in (123b) that it is N<sub>2</sub> that triggers gender agreement on the relative pronoun. Note that example (123b) with the relative pronoun *die* improves when the indefinite article is replaced by the definite article *de*, which is of course due to the fact that N<sub>1</sub> is then construed as a referring expression.

- (123) a. een boel<sub>sg</sub> bonen<sub>pl</sub> die verrot zijn<sub>pl</sub>/\*is<sub>sg</sub>  
           a lot [of] beans that rotten are/is  
       b. een liter<sub>[-neuter]</sub> water<sub>[+neuter]</sub> dat<sub>[+neuter]</sub>/\*die<sub>[-neuter]</sub> gemorst is  
           a liter [of] water that spilled is

Given that the relative clause may in principle modify the complete QC, one might want to claim that the examples in (123) are ambiguous, and can be associated with either the structures in the primeless or the structures in the primed examples in (124).

- (124) a. [een boel [bonen die verrot zijn]]  
       a'. [een [boel bonen] die verrot zijn]  
       b. [een liter [water dat gemorst is]]  
       b'. [een [[liter water] dat gemorst is]]

There is reason to assume that both structures are indeed available. First, recall from Section 4.1.1.3.2, sub I, that purely quantificational N<sub>1</sub>s normally cannot be preceded by a definite article, but that this becomes possible when the QC is modified by a relative clause; this is illustrated again in (125).

- (125) a. Ik heb een/\*de stoot studenten geïnterviewd.  
           I have a/the lot [of] students interviewed  
       b. de stoot studenten die door mij geïnterviewd zijn  
           the lot [of] students that by me interviewed are  
           'the many students that are interviewed by me'

We also showed in that section that this is a more general phenomenon: proper nouns like *Amsterdam*, which normally do not license a definite article, can be preceded by it when they are modified by a relative clause: cf. *het Amsterdam \*(dat ik ken uit mijn jeugd)* 'the Amsterdam \*(that I know from my childhood)'. The crucial point is that the definite article is licensed on the antecedent of the relative pronoun, and this suggests that in (125b) it is the full QC that acts as the antecedent of the relative pronoun: the definite article precedes N<sub>1</sub>, not N<sub>2</sub>. This suggests that the structures in the primed examples in (124) are possible alongside the primeless ones.

It seems, however, that the primed structures are not available when N<sub>1</sub> is referential. This can be made clear by means of the examples in (126). Despite its complexity, example (126a) seems acceptable: the first relative clause must be construed with the N<sub>2</sub> *sinaasappelen* and the second one with the N<sub>1</sub> *kistje*, which is clear from the fact that they agree with the respective relative pronouns in number/gender. Changing the order of the two relative clauses, as in (126a'), results in ungrammaticality, which would immediately follow if we assume that the relative clause modifying N<sub>2</sub> is embedded in the nominal projection headed by N<sub>2</sub>, as indicated in (126b), but not if we assume that it is external to a phrase containing both N<sub>1</sub> and N<sub>2</sub>.

- (126) a. ?een kistje sinaasappels [<sub>RC1</sub> die verrot zijn] [<sub>RC2</sub> dat kapot is]  
           a box<sub>dim</sub> [of] oranges                   that rotten are                   that broken is  
       a'. \*een kistje sinaasappels [<sub>RC2</sub> dat kapot is] [<sub>RC1</sub> die verrot zijn]  
       b. [een [kistje [sinaasappels<sub>i</sub> die<sub>i</sub> verrot zijn]]<sub>j</sub> dat<sub>j</sub> kapot is]

For completeness' sake, note that the same order restriction seem to hold when the modifiers are respectively a PP and a relative clause. The examples show that the modifier of N<sub>2</sub> always precedes the modifier of N<sub>1</sub>; example (127b') is of course grammatical but not under the intended reading that the oranges are from Spain.

- (127) a. een kistje sinaasappels [<sub>RC</sub> die verrot waren] [<sub>PP</sub> met roestige spijkers]  
           a box<sub>dim</sub> [of] oranges                   that rotten were                   with rusty nails  
       a'. \*een kist sinaasappels [met roestige spijkers] [die verrot waren]  
       b. een kistje sinaasappels [<sub>PP</sub> uit Spanje] [<sub>RC2</sub> dat kapot is]  
           a box<sub>dim</sub> [of] oranges                   from Spain                   that broken is  
       b'. #een kistje sinaasappels [<sub>RC2</sub> dat kapot is] [<sub>PP</sub> uit Spanje]

#### IV. Conclusion

This section has shown that both N<sub>1</sub> and N<sub>2</sub> can be modified. When N<sub>1</sub> is modified, it seems that the complete QC is in the scope of the modifier. When N<sub>2</sub> is modified either the complete QC or the projection of N<sub>2</sub> can be in the scope of the modifier, depending on the status of N<sub>1</sub>: when N<sub>1</sub> is purely quantificational, both structures seem available; when it is referential the scope of the modifier seems restricted to the projection of N<sub>2</sub>.

##### 4.1.1.6. A note on partitive and pseudo-partitive constructions

This section discusses the partitive and pseudo-partitive construction, which are exemplified in (128a) and (128b) respectively. The primed examples show that these constructions occur not only with cardinal numerals but also in the quantificational binominal constructions (QCs) discussed in the previous sections. Although the partitive and pseudo-partitive constructions seem identical at first sight, we will show that they behave quite differently. More specifically we will argue that, as the name already suggests, pseudo-partitive constructions are in fact not partitive constructions; despite appearances, the phrase *van die lekkere koekjes* in the (b)-examples is not a PP but a noun phrase. After a brief general introduction of the constructions in 4.1.1.6.1, which will also make clear why we discuss these constructions in this section on QCs, Section 4.1.1.6.2 will discuss the differences between the two constructions.

- (128) a. Vier van de koekjes lagen op tafel.  
           four of the cookies lay on the table  
       a'. Een paar van de koekjes lagen op tafel.  
           a couple of the cookies lay on the table  
       b. Ik wil graag vier van die lekkere koekjes.  
           I want please four of those tasty cookies  
       b'. Ik wil graag een paar van die lekkere koekjes.  
           I want please a couple of those tasty cookies

It is important to note here that our use of the notion pseudo-partitive construction differs from the one found in the literature, where it is often used to refer to binominal constructions like *een kop koffie* ‘a cup of coffee’, which were discussed in Section 4.1.1.

#### 4.1.1.6.1. *Partitive and pseudo-partitive constructions*

This section briefly discusses the partitive and the pseudo-partitive construction. We will show that partitive constructions contain a phonetically empty noun preceding the *van*-PP, which implies that examples like (128a') are in fact concealed QCs. Pseudo-partitive constructions do not contain a phonetically empty noun, but are special in that they contain a noun phrase in the guise of a spurious PP, which implies that (128b') must also be analyzed as a QC.

##### 1. *Partitive constructions*

Partitive constructions are noun phrases that refer to a subset of some set presupposed in discourse. They consist of a cardinal numeral or a quantifier expressing the cardinality or size of the subset, followed by a *van*-PP the complement of which denotes the presupposed set. Some examples are given in (129), in which the noun phrase *de koekjes* ‘the cookies’ refers to the presupposed set. In (129a) the cardinal numeral *vier* indicates that the cardinality of the subset is 4, and in (129b) the quantifier *veel* expresses that the subset is bigger than some implicitly assumed norm. Example (129c) shows that the universal quantifier *alle* ‘all’ cannot be used, possibly because it conveys redundant information: (129c) refers to the same set as the noun phrase *de/alle studenten* ‘the/all students’ does. Example (129d) with the distributive quantifier *elk* ‘each’, on the other hand, is acceptable: here reference is made not to the set as a whole, but to the entities making up this set.

- |          |                            |    |                             |
|----------|----------------------------|----|-----------------------------|
| (129) a. | <i>vier van de koekjes</i> | c. | <i>*alle van de koekjes</i> |
|          | four of the cookies        |    | many of the cookies         |
| b.       | <i>veel van de koekjes</i> | d. | <i>elk van de koekjes</i>   |
|          | all of the cookies         |    | each of the cookies         |

The partitive construction is syntactically headed by the numeral/quantifier, not by the complement of *van*. This is clear from the fact that the latter does not trigger number agreement on the finite verb; (130) shows that it is the numeral/quantifier that determines agreement (or, rather, the phonetically empty noun following it; cf. the discussion of (134)).

- |          |   |                 |                 |                    |
|----------|---|-----------------|-----------------|--------------------|
| (130) a. | <i>Eén van de studenten</i>               | <i>is/*zijn</i> | <i>gisteren</i> | <i>vertrokken.</i> |
|          | one of the students                       | is/are          | yesterday       | left               |
|          | ‘One of the students has left yesterday.’ |                 |                 |                    |
| b.       | <i>Vier van de studenten</i>              | <i>zijn/*is</i> | <i>gisteren</i> | <i>vertrokken.</i> |
|          | four of the students                      | are/is          | yesterday       | left               |

Given that nouns appearing as  $N_1$ s in QCs have quantificational meaning, it does not really come as a surprise that they can also occur in the partitive construction. Example (131) shows, however, that container and collective nouns

(and to a somewhat lesser extent also measure nouns) preceded by the indefinite article *een* 'a' give rise to a degraded result. When these  $N_1$ s are preceded by a cardinal numeral, the result is usually acceptable, despite the fact that most speakers interpret the  $N_1$ s (with the exception of *twee kilo*) primarily as referential.

- (131) a. *een aantal van de jongens*  
a number of the boys  
b. <sup>??</sup>*een kilo van de appels*      b'. *twee kilo/<sup>?</sup>kilo's van de appels*  
a kilo of the apples      two kilo/kilos of the apples  
c. *een stuk van de taart*      c'. *twee stukken van de taart*  
a piece of the cake      two pieces of the cake  
d. *\*een doos van de appels*      d'. <sup>?</sup>*twee dozen van de appels*  
a box of the apples      two boxes of the apples  
e. <sup>\*?</sup>*een groep van de studenten*      e'. *twee groepen van de studenten*  
a group of the students      two groups of the students

The acceptability of the construction also depends on the nature of the nominal complement of the *van*-PP: when the noun phrase is preceded by a demonstrative pronoun instead of a definite article, the result is fully acceptable, and the primary reading is the quantificational one. This holds both for expressions in which  $N_1$  is preceded by an indefinite article and expressions in which it is preceded by a numeral. This is shown in (132) for all marked examples in (131).

- (132) a. *een aantal van deze jongens*  
a number of these boys  
b. *een kilo van deze appels*      b'. *twee kilo/kilo's van deze appels*  
a kilo of these apples      two kilo/kilos of these apples  
c. *een stuk van deze taart*      c'. *twee stukken van deze taart*  
a piece of this cake      two pieces of this cake  
d. *een doos van deze appels*      d'. *twee dozen van deze appels*  
a box of these apples      two boxes of these apples  
e. *een groep van deze studenten*      e'. *twee groepen van deze studenten*  
a group of these students      two groups of these students

We have seen in (130) that number agreement on the verb is triggered by the part preceding the *van*-phrase. This also holds for the partitive constructions in (131) and (132) with part, container, and collective nouns. The quantifier and measure nouns behave differently, however: they allow agreement between the verb and the complement of the *van*-PP.

- (133) a. *Er is/zijn een aantal van de jongens niet aanwezig.*  
there walk<sub>pl</sub> a number<sub>sg</sub> of the boys not present  
'A number of the boys are not present.'  
b. *Er ligt/liggen een kilo van deze appels op tafel.*  
there lies/lie a kilo of these apples on the table  
c. *Er liggen/\*ligt twee stukken van de taart op tafel.*  
there lie/lies two pieces of the cake on the table

- d. Er staat/\*staan een doos van deze appels op tafel.  
there stands/stand a box of these apples on the table
- e. Een groep van deze studenten komt/komen hier kamperen.  
a group of these students comes/come here camping

The contrast in (133) is identical to the one we have seen in Section 4.1.1.2.1 concerning QCs: in the purely quantificational constructions it is  $N_2$  that triggers agreement with the verb, whereas in the more referential ones it is  $N_1$  that triggers agreement. Given that it is implausible that in (133) agreement on verb is triggered *directly* by the complement of the *van*-PP, it has been suggested that the partitive construction features an empty noun following the numeral/quantifier, which is construed as identical to the complement of the *van*-PP. This implies that the structures of the noun phrases in (130) are given as in (134): since the numeral *één* ‘one’ must be followed by a singular noun, whereas the numeral *vier* ‘four’ must be followed by a plural noun, the agreement facts in (130) can be accounted for by assuming that it is the empty noun that triggers agreement on the verb.

- (134) a. [één  $e_{sg}$  [van de studenten]]
- b. [vier  $e_{pl}$  [van de studenten]]

This proposal implies that the structures of the noun phrases in (133) are as given in (135): we are dealing with regular QCs in which the phonetically empty noun functions as  $N_2$ . The fact that the agreement pattern of the partitive construction in (133) is identical to that of the constructions discussed in Section 4.1.1.2.1 is now derived from the fact that both are quantificational binominal constructions.

- (135) a. [een aantal  $e_{pl}$  [van de studenten]]
- b. [een kilo  $e_{pl}$  [van deze appels]]
- c. [twee stukken  $e_{sg}$  [van de taart]]
- d. [een doos  $e_{pl}$  [van deze appels]]
- e. [een groep  $e_{pl}$  [van deze studenten]]

## II. Pseudo-partitive constructions

The primeless examples in (136a&b) seem structurally identical to those in (129a&b); the only difference is that the noun phrase complement of *van* is not preceded by the definite article *de* ‘the’ but by the distal demonstrative *die* ‘those’. It therefore will not come as a surprise that these examples may have a partitive reading. What we want to focus on here, however, is that there is a second reading with a meaning that comes close to “four/many cookies of a certain kind that is familiar to the addressee”.

- (136) a. vier van die (lekkere) koekjes  
four of those tasty cookies  
‘four of those tasty cookies’/‘four tasty cookies (of that sort)’
- b. veel van die (lekkere) koekjes  
many of those tasty cookies  
‘many of those tasty cookies’/‘many tasty cookies (of that sort)’

The same ambiguity arises in the examples in (137), where the *van*-phrase is preceded by nouns that may appear as N<sub>1</sub>s in QCs: all examples in (137) can be interpreted either as a partitive or as a pseudo-partitive construction. In passing note that constructions with the singular, neuter demonstrative *dat* trigger the same ambiguity; cf. the examples in (137b&c).

- (137) a. Ik wil een paar van die lekkere koekjes.  
           I want a couple of those tasty cookies  
       b. Ik wil twee liter van dat lekkere bier.  
           I want two liter of that nice beer  
       c. Ik wil een stuk van dat lekkere gebak.  
           I want a piece of that nice cake  
       d. Ik wil een kistje van die geurige sigaren.  
           I want a box<sub>dim</sub> of those aromatic cigars  
       e. Ik wil opnieuw een stelletje van die enthousiaste studenten.  
           I want again a couple of those enthusiastic students

The availability of the pseudo-partitive reading is due to the fact that the phrase *van die/dat* (A) + N can be used with the distribution of a DP, that is, despite the fact that it has the appearance of a PP it can be used in positions that are normally occupied by a noun phrase; cf. 5.2.3.2.2, sub V. This is illustrated in (138): in (138a) the *van*-phrase is used as the subject of the clause and in (138b) as the object. These examples also have the connotation that the denotation of the noun is familiar to the addressee, and often have an intensifying meaning comparable to English “these + Adj + N<sub>pl</sub>”.

- (138) a. Er liggen van die lekkere koekjes op tafel.  
           there lie of those tasty cookies on the table  
           ‘There are these tasty cookies lying on the table.’  
       b. Marie geeft altijd van die grappige voorbeelden.  
           Marie gives always of those funny examples  
           ‘Marie always gives these funny examples.’

Since PPs normally cannot function as subjects, we can conclude that the *van*-PPs in (136) and (137) are actually ambiguous: they may be interpreted either as a PP, which gives rise to the partitive reading, or as a noun phrase, which gives rise to the pseudo-partitive reading. Under this analysis both the partitive and the pseudo-partitive construction (137) are QCs, but they differ in that in the former case N<sub>2</sub> has the form of an empty noun, whereas in the latter case it is a spurious PP that functions as N<sub>2</sub>. This is exemplified in (139) for the noun phrase *een paar van die lekkere koekjes* in (137a).

- (139) a. Partitive: [een paar *e* [PP van die lekkere koekjes]]  
       b. Pseudo-partitive: [een paar [NP van die lekkere koekjes]]

#### 4.1.1.6.2. Similarities and differences

Partitive and pseudo-partitive constructions may be confused not only because they have the same morphological shape, but also because they share the property that

the selection restrictions of the verb can apparently be satisfied by the noun embedded in the *van*-phrase. This is illustrated by means of example (140a) involving the quantifier noun *aantal* ‘number’. Both under the partitive and under the pseudo-partitive reading the plurality requirement imposed by the verb is apparently satisfied by the plural noun *studenten* ‘students’. This follows from the analysis proposed in the previous section. The structure associated with the partitive reading is given in (140b): the quantifier noun is followed by an empty noun functioning as  $N_2$  and since the quantifier noun requires this empty noun to be plural, the latter can satisfy the selection restriction of *zich verenigen* ‘to unite’ in the same way as an overt  $N_2$  in a QC. The structure associated with the pseudo-partitive reading is given in (140b’): we are dealing with a regular QC in which  $N_2$  has the form of a spurious PP, and given that this spurious PP refers to a non-singleton set, the semantic requirement of the verb is satisfied.

- (140) a. Een aantal van die studenten verenigen zich.  
 a number of those students unite REFL  
 b. [Een aantal  $e_{pl}$  [<sub>PP</sub> van die studenten]] verenigen zich.  
 Partitive: ‘A number of those students (over there) united.’  
 b’. [Een aantal [<sub>NP</sub> van die studenten]] verenigen zich.  
 Pseudo-partitive: ‘A number of students (you know the type I mean) united.’

Recall that the part, container and collective nouns always function as the syntactic head of a QC and therefore block agreement between the verb and  $N_2$ , so it will not come as a surprise that they cannot enter constructions like (140). We have seen, however, that they do allow  $N_2$  to satisfy certain more semantic selection restrictions that do not have a syntactic reflex: example (141a) shows that the  $N_2$  *spinazie* can satisfy the requirement imposed by the verb *eten* ‘to eat’ that the direct object be edible. It is furthermore important to note that example (141b) is pragmatically odd due to the fact that it only allows a reading in which both the plate and the spinach have been eaten by Jan; apparently the complement of the PP-adjunct cannot satisfy the selection restriction imposed by the verb.

- (141) a. Jan heeft een bord spinazie opgegeten.  
 Jan has a plate [of] spinach prt.-eaten  
 b. <sup>S</sup>Jan heeft een bord met spinazie opgegeten.  
 Jan has a plate with spinach prt.-eaten

Example (142a) shows that, under both the partitive and the pseudo-partitive reading, the selection restriction imposed by *eten* ‘to eat’ is apparently satisfied by the noun *spinazie* in the *van*-phrase. Again, this follows from the proposed analysis. The structure associated with the partitive reading is given in (142b): the quantifier noun is followed by an empty noun functioning as  $N_2$ , which is construed as identical to the complement of the *van*-PP, and since this empty  $N_2$  can satisfy the selection restriction of *eten* in the same way as an overt  $N_2$  in a QC the result is pragmatically felicitous. The structure associated with the pseudo-partitive reading is given in (142b’): we are dealing with a regular QC in which  $N_2$  has the form of a spurious PP, and given that this spurious PP refers to an edible substance, the semantic requirement of the verb is satisfied.

- (142) a. Jan heeft een bord van die heerlijke spinazie opgegeten.  
 Jan has a plate of that delicious spinach prt.-eaten  
 b. Jan heeft [een bord [e] [<sub>PP</sub> van die heerlijke spinazie]] opgegeten.  
 Partitive: 'Jan ate a plate of that delicious spinach (over there).'
- b'. Jan heeft [een bord [<sub>NP</sub> van die heerlijke spinazie]] opgegeten.  
 Pseudo-partitive: 'Jan ate a plate of that delicious spinach (you know).'

Despite these similarities there are various ways to distinguish the two constructions. We have already seen that we can appeal to the meaning of the complete construction: a partitive construction denotes a subset of a presupposed superset, whereas a pseudo-partitive construction denotes set of entities of a kind familiar to the addressee. In addition, the following subsections will show that we can appeal to a number of more syntactic properties of the two constructions.

### I. The preposition *van*

The analyses of the partitive and pseudo-partitive noun phrases given above imply that the status of *van* differs in the two constructions: in the former it is a regular preposition, whereas in the latter it is a spurious one. To substantiate this claim, we will investigate in more detail constructions in which the spurious *van*-PP is used as an argument of a verb or a preposition, and show that it behaves as a noun phrase.

#### A. Selection

The spurious *van*-PP can substitute for nominal arguments of verbs, which is shown in the examples in (143), involving the verbs *zitten* 'to sit/to be' and *bakken* 'to bake'. The fact that the spurious *van*-PP functions as the subject in (143) is especially telling: genuine PPs normally cannot have this syntactic function.

- (143) a. Er zitten nog (van die) vieze koekjes in de trommel.  
 there sit still of those awful cookies in the tin  
 'There are still some of those awful cookies in the tin.'
- b. Hij bakt vaak (van die) vieze koekjes.  
 he bakes often of those awful cookies  
 'He often bakes (such) awful cookies.'

Example (144) shows that the spurious *van*-PP can also substitute for the nominal complement of a preposition. Again, this is revealing given that prepositions normally do not take PP-complements.

- (144) Zij loopt altijd op (van die) afgetrapte schoenen.  
 she walks always on of those worn.out shoes  
 'She always walks on worn-out shoes.'

The fact that the spurious *van*-PP has the distribution of a regular noun phrase is consistent with the analysis of the pseudo-partitive construction proposed in the previous subsection, where the *van*-phrase is analyzed as a nominal projection.

#### B. Extraposition

PP-complements of verbs differ from nominal complements in that they can undergo °PP-over-V. An example is given in (145a). As is shown in (145b),



however, the spurious *van*-PP patterns with the noun phrases in this respect. This again supports the claim that we are actually dealing with a noun phrase.

- (145) a. dat Jan vaak <op die trein> wacht <op die trein>.  
           that Jan often for that train waits  
           ‘that Jan is often waiting for that train.’  
       b. dat Jan vaak <van die vieze koekjes> bakt <\*van die vieze koekjes>.  
           that Jan often of those awful cookies bakes  
           ‘that Jan often bakes those awful cookies.’

Occasionally, ambiguity arises between a PP- and an NP-complement reading. PP-over-V can then serve to disambiguate the example: after extraposition of the *van*-phrase only the PP-complement reading survives. This is shown in (146).

- (146) a. Jan heeft van dat lekkere brood gegeten.  
           Jan has of that tasty bread eaten  
           PP-complement reading: ‘Jan has eaten of that tasty bread (over there).’  
           Pseudo-partitive reading: ‘Jan has eaten that tasty bread (you know which).’  
       b. Jan heeft gegeten van dat lekkere brood.  
           Jan has eaten of that nice bread  
           PP-complement reading only: ‘Jan has eaten of that tasty bread (over there).’

Unfortunately, this test cannot be applied directly to the partitive and pseudo-partitive construction, since PP-over-V leads to a bad result in both cases (although it has been claimed that PP-over-V is somewhat better in the case of the partitive reading). This is illustrated in (147).

- (147) Jan heeft een aantal <van die koekjes> opgegeten <\*van die koekjes>.  
           Jan has a number of those cookies prt.-eaten  
           ‘Jan ate a number of those cookies (you know the kind I mean).’  
           ‘Jan ate a number of cookies.’

### *C. R-pronominalization*

Partitive and pseudo-partitive constructions also differ with respect to °R-pronominalization. The examples in (148) show that the PP-complement *op die trein* ‘for that train’ from example (145a) can undergo this process, whereas this is not possible with the spurious *van*-PP from example (145b). Example (149) furthermore shows that R-pronominalization can also be used to disambiguate examples like (146). After pronominalization of *dat lekkere brood* only the PP-complement reading survives. These facts again support the suggestion that *van* is not a true preposition in the spurious *van*-PP.

- (148) a. dat Jan er vaak op wacht.  
           that Jan there often for waits  
           ‘that Jan is often waiting for it.’  
       b. \*dat Jan er vaak van bakt.  
           that Jan there often of bakes

- (149) Hij heeft er van gegeten.  
 he has there-of eaten  
 'He has eaten of it.'

The examples in (150) show that R-pronominalization of the *van*-phrase is possible in the partitive construction, but not in the pseudo-partitive construction: whereas (150a) is ambiguous between the partitive and pseudo-partitive reading, example (150b) only has the partitive reading. This finding is consistent with the analysis proposed in Section 4.1.1.6.1: whereas the *van*-phrase is a genuine PP in the partitive construction, it is a disguised noun phrase in the pseudo-partitive construction.

- (150) a. Hij heeft een boel/vier van die boeken gelezen.  
 he has a lot/four of those books read  
 'He has read four/a lot of those books (over there).'  
 'He has read a lot of books (of that kind).'
- b. Hij heeft er een boel/vier van gelezen.  
 he has there a lot/four of read  
 'He has read four/a lot of them.'

#### D. Quantitative *er*

Section 4.1.1.3.4 has shown that °quantitative *er* can be used to license an empty nominal projection corresponding to N<sub>2</sub> in a QC. If the partitive and the pseudo-partitive readings of example (150a) indeed correlate, respectively, with the interpretation of the *van*-phrase as a genuine PP and a concealed noun phrase, we correctly predict that (151) corresponds to (150a) on the pseudo-partitive reading only: quantitative *er* requires that the empty element *e* be interpreted as a noun phrase.

- (151) Hij heeft er [een boel [e]] gelezen.  
 he has ER a lot read  
 'He has read a lot of them.'

#### II. The demonstrative *die/dat*

The previous subsection has shown that the partitive *van*-phrase is headed by a true preposition, whereas the pseudo-partitive *van*-phrase is a disguised noun phrase. Something similar holds for the demonstrative. The examples in (152) and (153) show that whereas the distal demonstrative *die/dat* is part of a larger paradigm in the partitive construction, it cannot be replaced by any other determiner in the pseudo-partitive construction.

- (152) • Partitive construction
- a. een aantal van deze/die/de/mijn boeken  
 a number of these/those/the/my books  
 'a number of these/those/the/my books'
- b. een glas van dit/dat/het/jouw bier  
 a glass of this/that/the/your beer  
 'a glass of this/that/the/your beer'

- (153) • Pseudo-partitive construction
- a. een aantal van die/#deze/#de/#mijn boeken  
a number of those/these/the/my books  
'a number of books (of that type)'
  - b. een glas van dat/#dit/#het/#jouw bier  
a glass of that/this/the/your beer  
'a glass of beer (of that type)'

The fact that the examples in (153) can only be interpreted as a pseudo-partitive construction with *die* and *dat* suggests that these distal demonstratives are defective. This can be further supported by the fact that noun phrases containing a distal demonstrative normally can be modified by means of the locational adjunct *daar* 'over there'. As is shown in (154), the presence of this adjunct has a disambiguating effect on potential ambiguous examples; the presence of *daar* blocks the pseudo-partitive reading.

- (154) a. een aantal van die boeken daar  
a number of those books over there  
'a number of those books over there'
- b. een glas van dat bier daar  
a glass of that beer over there  
'a glass of that beer over there'

The prosodic properties of the demonstrative also suggest that we are dealing with a defective form in the pseudo-partitive construction. Demonstratives are typically used in contrastive contexts, and can therefore readily be assigned contrastive accent: *niet DIT maar DAT boek* 'not this but that book'. The demonstrative in the pseudo-partitive construction, however, resists accent: the examples in (155) can only be interpreted as true partitive constructions.

- (155) a. een aantal van DIE boeken  
a number of those books  
'a number of THOSE books'
- b. een glas van DAT bier  
a glass of that beer  
'a glass of THAT beer'

Finally, (156b) shows that the demonstrative cannot be followed by a numeral or quantifier in the spurious *van*-PP, which suggests that the defective demonstrative is not a regular determiner.

- (156) a. Jan heeft die (drie) lekkere taarten gebakken.  
Jan has those three tasty pies baked  
'Jan baked those (three) tasty pies.'
- b. Jan heeft van die (\*drie) taarten gebakken.  
Jan has of those three pies baked  
'Jan bakes these tasty pies.'

### III. Definiteness of the complement of *van*

Since the partitive construction refers to a subset of a presupposed set, the complement of *van* must be definite. This predicts that the indefinite determiner *zulk(e)* ‘such’ cannot occur in the partitive construction. As is shown in (157), this prediction is indeed borne out; the noun phrases following *van* only have a type-reading and in that sense resemble the pseudo-partitive reading.

- (157) a. een paar    van    zulke studenten  
           a couple   of    such students  
       b. een kilo    van    zulke aardappelen  
           a kilo     of    such potatoes  
       c. een glas    van    zulk bier  
           a glass    of    such beer  
       d. een stuk    van    zulke kaas  
           a piece    of    such cheese  
       e. een school van    zulke vissen  
           a shoal    of    such fish

#### 4.1.1.6.3. Conclusion

This section has discussed the partitive and pseudo-partitive construction. It has been argued in 4.1.1.6.1 that the pseudo-partitive construction is actually a regular QC, albeit that the projection of  $N_2$  is a nominal disguised as a *van die N* phrase with a spurious preposition *van*. The partitive construction, on the other hand, is a noun phrase headed by an empty noun followed by a partitive *van*-PP. Due to the fact that the empty noun may function as the  $N_1$  of a QC, the partitive construction may have the same morphological shape as a pseudo-partitive construction. Section 4.1.1.6.2 therefore discussed some properties of the spurious nominal *van die N* phrase that are helpful in distinguishing the two constructions.

#### 4.1.2. Non-quantificational constructions: een soort boek ‘a kind of book’

Example (158) shows that binominal phrases need not be quantificational. These non-quantificational examples typically involve the noun *soort*. As in Section 4.1.1, we will refer to the first noun (*soort*) as  $N_1$ , and to the second noun as  $N_2$ .

- (158) a. deze/die soort            aap/apen  
           this/that species [of] monkey/monkeys  
       b. dit/dat soort            auto/auto's  
           this/that kind [of] car/cars  
       c. een soort    appel/appels  
           a kind [of] apple/apples  
           ‘an apple-like thing/apple-like things’

We will see in this section that the three uses of *soort* in (158) differ in certain respects: in (158a), the noun *soort* is clearly used as a referential expression and the binominal construction refers to a contextually determined species of monkey. This is less clear in the other two uses: example (158b) has a type reading in the sense that it refers to a set of cars that resemble a certain car/certain cars that is/are under

discussion; example (158c) does not refer to an apple/apples but to an entity/entities that resemble an apple in a certain way. That the constructions in (158) differ from the quantificational constructions discussed in Section 4.1.1 is clear from the fact that  $N_2$  may be a singular noun (whereas  $N_2$  in the QC must be a plural or a non-count noun).

The referential noun *soort* in (158a) seems to be part of a larger paradigm that includes more or less synonymous expressions like *type* ‘type’, *model* ‘type/model’ and *merk* ‘brand’. Schermer-Vermeer (2008) has shown that the use of this construction has been on the rise over the last century, and that a growing set of nouns may enter this construction: examples that occur frequently in the *Corpus Gesproken Nederlands* are *formaat* ‘size’, *genre* ‘type’, *kaliber* ‘caliber/size’, *kleur* ‘color’, *kwaliteit* ‘quality’, *maat* ‘size’, *slag* ‘sort’, but there are many more incidental cases; some examples involving these nouns are given in (159).

- (159) a. die kleur behang  
that color wallpaper  
b. deze kwaliteit stof  
this quality fabrics  
c. deze maat schoen/schoenen  
this size shoe/shoes

In the following subsections, we will focus on the examples with the noun *soort*, and show how the three constructions in (158) differ. Where possible we will show that the examples in (159) behave more or less like the noun *soort* in (158a).

### 1. Gender (demonstratives)

That we are dealing with three different, but homophonous, nouns in (158) is not only clear from the meaning differences between the three constructions but also from the fact that the nouns have different genders. Consider again the examples in (158a&b): the noun *soort* ‘species’ in (158a) is non-neuter, which is clear from the fact that it takes the non-neuter demonstratives *deze/die* ‘this/that’: *deze/die soort aap/apen* ‘this/that species of monkey/monkeys’. The noun *soort* ‘kind of’ in (158b), on the other hand, is neuter, which is clear from the fact that it takes the neuter demonstratives *dit/dat* ‘this/that’: *dit/dat soort auto/auto’s*. It is difficult to determine the gender of the noun *soort* ‘N-like entity’ in (158c) given that it differs from the other two nouns in not allowing these definite demonstratives at all.

It can further be noted that the non-neuter noun *soort* ‘species’ imposes gender restrictions on  $N_2$ ; it can be followed by singular, non-neuter nouns like *aap* ‘monkey’ but not by singular, neuter nouns like *paard* ‘horse’. The neuter noun *soort* ‘kind of’ does not impose similar restrictions on  $N_2$ , which can therefore be both neuter and non-neuter. The third use of *soort* is also compatible with both neuter and non-neuter  $N_2$ s.

- (160) a. \*? *deze/die*<sub>[-neuter]</sub> *soort*<sub>[-neuter]</sub> *paard*<sub>[+neuter]</sub>  
this/that species [of] horse  
b. *dit/dat*<sub>[+neuter]</sub> *soort*<sub>[+neuter]</sub> *hond*<sub>[-neuter]</sub>  
this/that kind [of] dog

- c. een soort paard/hond  
 a kind [of] horse/dog  
 'a dog/horse-like animal'

Non-neuter N<sub>1</sub>s like *kleur* 'color' and *maat* 'size' in the primeless examples in (161) often behave like the non-neuter noun *soort* 'species' in not allowing neuter N<sub>2</sub>s. Neuter nouns like *formaat* 'size', *genre* 'type' in the primed examples do not impose a similar restriction on N<sub>2</sub>; cf. Schermer-Vermeer (2008). It seems, however, that the status of mixed cases with non-neuter N<sub>1</sub>s and neuter N<sub>2</sub>s also depends on the choice of N<sub>2</sub>: an example like *die kleur hemd* in (161a) is much more degraded than *die kleur behang* 'that color of wallpaper' in (159a), which also involves a neuter N<sub>2</sub> but can actually be found on the internet.

- (161) a. ??deze/die kleur<sub>[-neuter]</sub> hemd<sub>[+neuter]</sub> a'. dit/dat formaat<sub>[+neuter]</sub> boek<sub>[-neuter]</sub>  
           this/that color [of] shirt           this/that size [of] book  
       b. ??deze/die maat<sub>[-neuter]</sub> hemd<sub>[+neuter]</sub> b'. dit/dat genre<sub>[+neuter]</sub> lezer<sub>[-neuter]</sub>  
           this/that size [of] shirt           this that type [of] reader

## II. Compounding

Another conspicuous difference between the examples in (158) is that the non-neuter noun *soort* 'species' in (158a) can appear as the second member of a compound with a similar kind of meaning, whereas this is completely impossible with the N<sub>1</sub> *soort* 'N-like entity' in (158c); the compound *appelsoort* in (162c) is of course acceptable but only as the counterpart of the binominal construction *dat soort apple* 'that species of apple'. Example (162b) further shows that the result with the neuter N<sub>1</sub> *soort* 'kind of' in (158b) is somewhat marginal; furthermore it seems hard to interpret this compound with the "resemblance" reading typical of this noun.

- (162) a. de apensoort  
           'the species of monkeys'  
       b. ?het autosoort  
           'the kind of car'  
       c. #een appelsoort

The examples in (163) show that nouns like *kleur* 'color', *kwaliteit* 'quality' and *maat* 'size' behave just like the non-neuter noun *soort* 'species'. All these examples occur frequently on the internet.

- (163) a. die behangkleur  
           'that color of wall paper'  
       b. deze stofkwaliteit  
           'that quality of fabric'  
       c. deze schoenmaat  
           'that size of shoe'

## III. Pluralization

The noun *soort* 'N-like entity' also differs from the other two nouns in that it does not allow plural formation: example (164c) is acceptable but only under the same

kind of reading as (164a) or (164b); it does not have the interpretation “two apple-like thngs”. The plural examples in (164a) and (164b) impose different selection restrictions on  $N_2$ :  $N_2$  must be plural in the former, but can be singular in the latter.

- (164) a. twee soorten apen/<sup>#</sup>aap  
           two species [of] monkeys/monkey  
       b. twee soorten auto/auto's  
           two kinds [of] car/cars  
       c. <sup>#</sup>twee soorten appel/appels  
           two kinds [of] apple/apples

A caveat is in order here, however. For convenience, we have translated the non-neuter noun *soort* ‘species’ in (158a) by means of the English noun *species*. This translation may actually be too narrow, since it may also be combined with  $N_2$ s like *postzegels* ‘stamps’ and substance nouns like *koffie* ‘coffee’.

- (165) a. deze/die soort postzegels  
           this/that kind [of] stamps  
       b. deze/die soort koffie  
           this/that kind [of] coffee

This may raise the question of whether we are really dealing with the plural form of the neuter noun *soort* ‘kind of’ in (164b); it may actually involve the plural form of the non-neuter noun. A reason to assume this is that the neuter noun cannot be modified by means of a quantifier like *elk* ‘each’. Since nouns that have a plural form generally do allow modification by *elk* ‘each’, the ungrammaticality of (166b) casts some doubt on the assumption that we are dealing with the plural form of the neuter noun *soort* in (164b). We leave this for future research.

- (166) a. elke<sub>[-neuter]</sub> soort aap  
           each kind [of] monkey  
       b. \*elk<sub>[+neuter]</sub> soort auto  
           each kind [of] car

It is hard to determine whether nouns like *kleur* ‘color’, *kwaliteit* ‘quality’ and *maat* ‘size’ behave like the non-neuter noun *soort* ‘species’ with respect to pluralization; the examples in (167) show that the plural form *kleuren* can readily be followed by a substance noun, but not by a count noun. We leave establishing the precise status of examples like (167) to future research as well.

- (167) a. drie kleuren behang  
           three colors wallpaper  
       b. drie kleuren <sup>?</sup>trui/\*truien  
           the colors sweater/sweaters

#### IV. Articles

The constructions in (158) are similar in that they normally do not allow a definite determiner. However, this restriction is relaxed in the case of (158a&b), when the construction is modified by a relative clause. The binominal construction in (168c) is acceptable but only under a reading comparable to (168a) or (168b). Example

(169) shows that a noun like *kleur* behaves like the non-neuter noun *soort* ‘species’ in this respect.

- (168) a. de soort            vogels \*(die Jan bestudeert)  
           the species [of] birds    that Jan studies  
       b. het soort        auto \*(dat Jan graag wil bezitten)  
           the kind [of] car    that Jan gladly wants possess  
           ‘the kind of car that Jan wants to have’  
       c. #het/de soort appel (dat/die Jan lekker vindt)  
           the kind [of] apple that Jan tasty considers
- (169) de kleur behang \*(die ik zoek) is niet verkrijgbaar  
           the color wallpaper that I look.for is not available

Attributive adjectives can license the indefinite determiner *een* on the nouns *soort* ‘species’ and *soort* ‘kind’ but only when they precede N<sub>1</sub>. This is shown in (170); the primed examples are only acceptable under the “of a sort” reading (that is, (170a’) can be interpreted as “a beautiful monkey of a sort”), in which case an indefinite article must be present. The examples in (171) show again that a noun like *kleur* behaves like the non-neuter noun *soort* ‘species’ in this respect.

- (170) a. een mooie soort aap a’. #een soort mooie aap  
           a beautiful species [of] monkey  
       b. <sup>(2)</sup>een duur soort auto b’. #een soort dure auto  
           an expensive kind [of] car
- (171) a. een mooie kleur behang  
           a beautiful color wallpaper  
       b. \*een kleur mooi behang

#### V. Insertion of *van* ‘of’ and attributive modification

Another difference involves the insertion of the preposition *van* ‘of’ between N<sub>1</sub> and N<sub>2</sub>. The examples in (172) show that this is readily possible in examples like (158c). Examples like (172a) sound somewhat marginal. They can be found on the internet but the number of cases is relatively small: A Google search on the string [*deze soort van*] resulted in about 7,000 hits, many of which did not instantiate the relevant construction. Judgments on examples like (172b) vary among speakers, but examples of this construction do occur frequently in informal spoken Dutch and can readily be found on the internet; a Google search performed in November 2008 on the string [*dit soort van*] resulted in more than 50,000 hits, and a cursory look at the results revealed that most cases instantiated the relevant construction.

- (172) a. ??deze soort van aap  
           that species of monkey  
       b. %dit soort van auto  
           this kind of car  
       c. een soort van appel  
           a kind of apple  
           ‘an apple-like thing’



The examples in (173) with the indefinite article *een* are all acceptable but only on a reading similar to (172c). Note that addition of an attributive adjective triggers a more referential reading of the noun *soort*, which makes the example unacceptable.

- (173) a. *een* <sup>#</sup>(\**mooie*) *soort* *van aap*  
           a beautiful species of monkey  
       b. *een* <sup>#</sup>(\**duur*) *soort* *van auto's*  
           an expensive kind of cars  
       c. *een* (\**lekkere*) *soort* *van appel*  
           a tasty kind of apple  
           ‘an apple-like thing’

The examples in (174) show that with nouns like *kleur* ‘color’, *kwaliteit* ‘quality’ and *maat* ‘size’, insertion of *van* gives rise to an unacceptable result. These nouns therefore seem to pattern again with the non-neuter noun *soort* ‘species’.

- (174) a. \**die* *kleur* *van behang*  
           that color of wallpaper  
       b. \**deze* *kwaliteit* *van stof*  
           this quality of fabrics  
       c. \**deze* *maat* *van schoen/schoenen*  
           this size of shoe/shoes

#### VI. The syntactic status of $N_2$ (number agreement)

The constructions in (158) also differ with respect to the question what the syntactic head of the construction is. Example (175a) is only fully acceptable when the non-neuter noun *soort* ‘species’ triggers agreement on the finite verb, which must therefore be considered the syntactic head of the construction. In (175b), on the other hand, agreement can be triggered either by  $N_1$  or by  $N_2$ , which shows that either of the two nouns can act as the syntactic head of the construction. With the noun *soort* ‘N-like entity’, it is always  $N_2$  that functions as the syntactic head of the construction that triggers agreement.

- (175) a. *Deze/die soort* *vogels is/\*zijn moeilijk te observeren.*  
           this/that species [of] birds is/are hard to observe  
       b. *Dit/dat soort* *vragen is/zijn moeilijk te beantwoorden.*  
           this/that kind [of] questions is/are hard to answer  
       c. *Er liggen/\*ligt een soort appels op de tafel.*  
           there lie/lies a kind [of] apples on the table

Note, however, that when the neuter noun *soort* ‘kind of’ is preceded by the definite article and functions as the antecedent of a relative clause, agreement of  $N_2$  and the verb in the matrix clause gives rise to a degraded result. When the relative pronoun takes  $N_2$  as its antecedent, as in (176b), agreement between  $N_2$  and the finite verb becomes perhaps slightly better, but the result is still marked.

- (176) a. *Het soort<sub>i</sub> vragen dat<sub>i</sub> jij stelt is/\*zijn moeilijk te beantwoorden.*  
           this kind [of] questions that you ask is/are hard to answer

- b. Het soort vragen<sub>i</sub> die<sub>i</sub> jij stelt is/<sup>??</sup>zijn moeilijk te beantwoorden.  
 this kind [of] questions that you ask is/are hard to answer

The nouns *type* and *model* in (177a&b) do not allow N<sub>2</sub> to trigger agreement on the verb, which suggests that they fall into the same category as the non-neuter noun *soort* ‘species’; however, giving judgments is somewhat complicated by the fact that *model* does not readily take a plural N<sub>2</sub>, and that the noun *type* is also more common with a singular N<sub>2</sub>. Nouns like *kleur* ‘color’ also require that N<sub>1</sub> triggers agreement on the verb.

- (177) a. Dit type auto’s rijdt/\*rijden snel.  
           this type [of] cars drives/drive fast  
       b. Dit model auto’s is/\*zijn erg geliefd.  
           this model [of] cars is/are very popular  
       c. Deze kleur bloemen is/\*zijn erg mooi.  
           this color flowers is/are very beautiful

### VII. The semantic status of N<sub>2</sub>

The examples in (178) show that, as in the QCs, N<sub>2</sub> may act as the semantic head of all binominal *soort*-constructions. The requirement that the verb *verzamelen* takes a plural count noun or a substance noun as its direct object is satisfied by N<sub>2</sub>; when N<sub>2</sub> is a singular count noun, the result is ungrammatical.

- (178) a. Jan verzamelt deze soort postzegels/\*postzegel/wijn.  
           Jan collects this kind [of] stamps/stamp/wine  
       b. Jan verzamelt dit soort postzegels/\*postzegel/wijn.  
           Jan collects this kind [of] stamps/stamp/wine  
       c. Jan verzamelt een soort postzegels/\*postzegel/wijn.  
           Jan collects a kind [of] stamps/stamp/wine

### VIII. Conclusion

This section has discussed some of the properties of the non-quantificational constructions in (158), and it has been shown that the three homophonous forms are different in various respects. Since these forms have not been investigated systematically in the literature, future research on the three constructions in question will undoubtedly reveal more systematic differences. Furthermore, this section has shown that the behavior of the other nouns that may enter the non-quantificational construction is similar to that of the non-neuter noun *soort* ‘species’ in (158a).

#### 4.1.3. Other constructions

Besides the binominal constructions discussed in Sections 4.1.1 and 4.1.2, there are various other types of binominal constructions without a preposition. Although we are generally dealing with a modification relation between the two nouns, it is sometimes not immediately clear in which direction the modification relation goes. An example like *de staat Washington* ‘the state Washington’, for instance, may be ambiguous between two different readings: on the first reading N<sub>2</sub> has a modifying function with respect to N<sub>1</sub>, and enables the hearer to pick out the intended state; on the second reading N<sub>1</sub> modifies N<sub>2</sub>, and thus distinguishes between Washington DC

and the state of Washington. The two readings seem to differ in the intonation patterns they trigger: on the first reading, accent is preferably given to  $N_2$ , whereas on the second reading it is instead  $N_1$  that receives contrastive accent. It may be the case that the two readings also involve different syntactic structures (for instance [<sub>NP</sub> N [<sub>NP</sub> N]] versus [<sub>NP</sub> [<sub>NP</sub> N] N]), but at this moment we do not have any evidence that bears on this issue. It seems that the most common modification relation is that in which  $N_2$  has a modifying function with respect to  $N_1$ . Some typical examples, which are often given in the literature, are given in (179). This section will discuss a number of systematic types of examples.

- (179) a. de maand        mei  
          the month [of] may  
      b. de leraar    wiskunde  
          the teacher math  
          'the math teacher'

*I. Binominal constructions that can be used as vocatives and arguments*

In this construction type,  $N_2$  is a proper noun referring to a person. When the construction as a whole refers to a person,  $N_1$  can be a rank in a hierarchically ordered organization like the army or the church, a title, a form of address or a kinship noun (especially *tante* 'aunt' and *oom* 'uncle'). Some examples, mainly adapted from Haeseryn et al. (1997), are given in (180).

- (180) a. Rank: *koningin Beatrix* 'Queen Beatrix'; *generaal McArthur* 'General McArthur'  
      b. Title: *doctor Jansen* 'Dr. Jansen'; *Graaf Gisenstijn* 'Count Gisenstijn'  
      c. Form of address: *meneer/mevrouw Verdonk* 'Mr./Mrs. Verdonk'  
      d. Kinship noun: *tante Jeanne* 'Aunt Jeanne'; *oom/ome Ben* 'Uncle Ben'

The resulting structures in (180) function as a complex proper nouns, which is clear from the fact that they normally cannot be preceded by an article. The examples in (181) show that in this respect they crucially differ from constructions in which the  $N_1$ s occur on their own.

- (181) a. Ik heb (\*de) koningin Beatrix gezien.  
          I have the Queen Beatrix seen  
      b. Ik heb \*(de) koningin gezien.  
          I have the Queen seen

It is also clear from the fact illustrated in (182) that, like proper nouns, binominal constructions can be used both as vocative, and in regular argument position.

- (182) a. Doctor Jansen, kunt u even                komen?  
          Dr. Jansen    can you for.a.moment come  
      b. Kan dokter Jansen even                komen?  
          can Doctor Jansen for.a.moment come

Forms of address like *meneer* and *mevrouw* can be followed by a noun phrase denoting a highly ranked profession or social function, as in (183a). When the

second noun phrase denotes a “lower” profession or implies some subjective qualification, as in (183b), the complex noun phrase gets an ironic connotation. In cases like these, the projection of  $N_2$  necessarily contains the definite article.  $N_1$ , on the other hand, is never preceded by a definite article, which again suggests that the construction as a whole functions as a proper noun.

- (183) a. mevrouw de voorzitter; meneer de president  
 Madam the Chairman; Mister the President  
 b. meneer de student; meneer de verrader  
 Mister the student; Mister the traitor

Constructions like (183) differ from the ones in (180), however, in that their use is more restricted. Their normal use is that of vocative, and they can only be used in argument position when the person referred to is physically present. So, whereas (182b) can be uttered in the absence of the intended person, example (184b) seems to require that the intended person be physically present.

- (184) a. Mevrouw de voorzitter, kunt u uitleggen waarom ....  
 Mrs. the chairperson can you explain why  
 b. Kan mevrouw de voorzitter uitleggen waarom ....  
 can Mrs. the chairperson explain why

Example (185a) illustrates by means of the title noun *professor* that some of the  $N_1$ s in (180) can be pluralized (De Belder 2009). Since this requires that a determiner be present, it is not clear whether we are dealing with a construction of the type in (180) here. The fact illustrated in (185b) that such plural noun phrases cannot be used as vocative suggests that we are dealing with a binominal construction of the type discussed in the next subsection.

- (185) a. Kunnen \*(de) professoren Chomsky and Kayne even komen?  
 can the professors Chomsky and Kayne for.a.moment come  
 b. \*<sup>?</sup>Professoren Chomsky and Kayne, kunt u even komen?  
 Professors Chomsky and Kayne can you for.a.moment come

Binominal constructions like *tante Jeanne* ‘aunt Jeanne’ must be distinguished from phrases like *mijn zuster Els*. This is immediately clear from the fact that the latter cannot be used as a vocative; see the contrast between the (c)-examples in (186). The proper noun *Els* functions instead as an appositive, which is clear from the distinctive intonation pattern in (186b’), with an intonation break preceding and following it; (186a’) does not exhibit this intonation pattern, but can probably be seen as the non-restrictive counterpart of (186b’). For a more extensive discussion of appositions, see Section 3.1.3.

- |  |  |
|--|--|
| <p>(186) a. Tante Jeanne is ziek.<br/>         Aunt Jeanne is ill<br/>         b. *Tante, Jeanne, is ziek.<br/>         aunt Jeanne is ill<br/>         c. Tante Jeanne, bent u boven?<br/>         Aunt Jeanne are you upstairs</p> | <p>a’. Mijn zuster Els is ziek.<br/>         my sister Els is ill<br/>         b’. Mijn zuster, Els, is ziek.<br/>         my sister Els is ill<br/>         c’. *Mijn zuster Els, ben je boven?<br/>         my sister Els are you upstairs</p> |
|--|--|

*II. Binominal constructions that can only be used as arguments*

When the construction as a whole refers to a geographical entity,  $N_1$  can be a noun that denotes the set of geographical entities that the referent of the entire binominal construction is a member of. Some typical examples are given in (187). In examples like these the modification relation is typically bidirectional: while it is clear that the proper noun enables the hearer to identify the intended river, state or city, it is at the same time expressed that the proper noun refers to a river, a state and a city, respectively. Whether both directions are indeed activated may also be related to the extra-linguistic knowledge of the hearer: in (187b), it will be prominent for those speakers who are aware of the fact that the proper noun *Utrecht* is used both for the province Utrecht and its capital city. Note that in these cases  $N_1$  is typically preceded by a definite article, and that the proper noun may also be preceded by an article, provided that it also has one when used in isolation.

- (187) a. *de rivier de Amstel* 'the river Amstel'  
 b. *de provincie/stad Utrecht* 'the province of Utrecht'  
 c. *de stad Amsterdam* 'the city of Amsterdam'

The bidirectional relation also seems to hold for examples like (188). This is perhaps not so clear in (188a), where it is clearly the proper noun that modifies the noun *familie* and not vice versa, but it is in (188b), where it is simultaneously expressed that we are dealing with a poetess called Vasalis, and that Vasalis is a poetess. Again, the use of a definite article seems obligatory.

- (188) a. *de familie Jansen*  
           the family Jansen  
           'the Jansen family'  
 b. *de dichteres Vasalis*  
      the poetess Vasalis

Note that the order of the common and the proper noun can sometimes be reversed, as is shown in (189a). By using this example we are referring to the person Jan Wolkers in his capacity as a writer (as opposed to his quality as, e.g., a sculptor). It seems reasonable, however, to not consider this example as a binominal construction but as the restrictive counterpart of the construction in (189b), where we are clearly dealing with an appositive noun phrase.

- (189) a. Jan Wolkers *de schrijver* is erg geliefd in Nederland.  
           Jan Wolkers the writer is much loved in the Netherlands  
 b. Jan Wolkers, *de (beroemde) schrijver*, houdt hier vanavond een lezing.  
      Jan Wolkers the famous writer gives here tonight a lecture  
      'Jan Wolkers, the (famous) writer, will give a lecture here tonight.'

Examples like (190) seem close to the examples in (189) but may be crucially different as the phrase following the proper noun may simply function as a surname, which is orthographically represented by writing  $N_2$  with a capital and may be reflected by the fact that  $N_2$  has lost its descriptive content; the person referred to by

Jan de Bakker in (190b), who was the first martyr of the Protestant faith in the Netherlands, was not a baker but a priest.

- (190) a. Paulus de Boskabouter  
           Paulus the wood.gnome  
       b. Jan de Bakker

As a result of the addition of the proper noun, the binominal phrases discussed so far (188) are uniquely identifying. The same effect can be attained by the noun phrases that contain a numeral in (191a), where the numeral identifies the referent of the full noun phrase. Something similar happens in (191b&c), where the nouns *boek* and *Jan* are not used in their normal denoting function but as meta-linguistic expressions referring to the word themselves.

- (191) a. agent 007; kamer B105; bus 22; bladzijde 79  
           agent 007; room B105; bus 22; page 79  
       b. Het woord *boek* is een enkelvoudig nomen.  
           the word *boek* is a singular noun  
       c. In taalkundige artikelen wordt altijd de naam *Jan* gebruikt.  
           in linguistic articles is always the name *Jan* used  
           ‘In linguistic articles it is always the name *Jan* that is used.’

### III. Unclear cases

Occasionally, it is not so clear whether we are dealing with true binominal constructions. Take (192a) as an example. This example differs from the examples above in that it is not a uniquely referring expression. Furthermore, it is possible to express the same meaning by means of a postnominal PP. This suggests that the binominal construction is simply an abbreviated version of the noun phrase with a PP-modifier. Something similar could be claimed for (192b), which can be seen as the abbreviated version of (192b’).

- (192) a. een kaartje (voor de) eerste klasse  
           a ticket for the first class  
           ‘a first class ticket’  
       b. een retourtje Amsterdam-Den Haag  
           a return.ticket Amsterdam-the Hague  
       b’. een retourtje van Amsterdam naar Den Haag  
           a return.ticket from Amsterdam to the Hague

In cases like (193), the binominal construction as a whole acts as a proper noun, referring to a certain cabinet, committee, method, etc. The second noun is normally the family name of some person who is intimately related to the referent of the noun phrase as a whole. In cases like these, the binominal construction comes pretty close to a compound, which is also clear from the fact that, in writing, the two nouns are generally linked by means of a hyphen.

- (193) a. het vierde kabinet-Balkenende  
the fourth cabinet-Balkenende  
b. de commissie-Van Traa  
the committee-Van Traa  
c. de methode-Paardekooper  
the method-Paardekooper

The examples in (194), in which the second noun phrase has the form of a genitive noun phrase, are clearly relics from the older stages of the language. In present-day Dutch such noun phrases would normally be realized by means of a postnominal *van*-phrase instead of the genitive noun phrase.

- (194) a. Dag des Oordeels  
day the<sub>gen</sub> judgment<sub>gen</sub>  
'Doomsday'  
b. de heer des huizes  
the master the<sub>gen</sub> house<sub>gen</sub>  
'the master of the house'

## 4.2. Binominal constructions with a preposition

In the previous section, we were mainly concerned with binominal constructions in which the two nouns may or must be adjacent. In this section, we will deal with binominal constructions that contain a preposition. Section 4.2.1 will start with a discussion of *N van een N* constructions like *een schat van een kat*, which obligatorily contain the preposition *van* and are used to express, e.g., metaphoric comparison: "a cat like a treasure". This is followed in Section 4.2.2 by a discussion of the interrogative construction *wat voor een N* 'what kind of N', which obligatorily contains the preposition *voor*, and in which the interrogative pronoun *wat* is used to request a further specification of the set denoted by the second noun.

### 4.2.1. The *N van een N* 'N of a N' construction

This section will discuss *N van een N* constructions of the type in (195). The examples in (195a) and (195b) show that there are two semantic subtypes of this construction; cf. Den Dikken (2006: ch.5). Example (195a) involves some form of metaphoric comparison: the size of the referent of the noun phrase is compared to a tree, that is, he is huge. The most prominent reading of (195), on the other hand, is one in which a property is attributed to the referent of the noun phrase in his/her capacity as a doctor: although the referent may be brilliant in most respects, (s)he is certainly not brilliant as a doctor. In many cases, however, it is not easy to distinguish between the two subtypes. For example, example (195c) is a case of evaluative metaphoric comparison; the referent of the phrase is not only compared with a dike but this comparison is (in this case conventionally) used to simultaneously express that the referent has certain (unspecified) properties that are highly desirable for a managing director.

- (195) a. Hij is een boom van een kerel.  
 he is a tree of a fellow  
 'a fellow like a tree'
- b. Hij is een onbenul van een dokter.  
 he is an idiot of a doctor  
 'He is an idiot as a doctor'.
- c. Hij is een dijk van een directeur.  
 he is a dike of a director

The semantic relation between the nouns in the binominal *N van een N* construction in (196a) is therefore quite different in nature from the relation between the nouns in a construction like (196b), where the PP *van een piraat* 'of a pirate' is a PP-modifier of the noun *schat* 'treasure': in the first we are discussing a cat, whereas in the latter we are discussing a treasure.

- (196) a. Marie heeft een schat van een kat.  
 Marie has a treasure of a cat  
 'Marie has a very sweet cat.'
- b. Jan bewonderde een schat van een piraat.  
 Jan admired a treasure of a pirate  
 'Jan admires a treasure of a pirate.'

The two constructions also differ syntactically. The indefinite articles in the binominal construction in (196a), for example, cannot be replaced by the definite article *de* 'the' (at least not with preservation of the intended metaphoric meaning of the example), whereas this is perfectly possible in the modification construction in (196b). This is illustrated in (197).

- (197) a. #Marie heeft *de* schat van een kat.  
 a'. #Marie heeft een schat van *de* kat.  
 a''. #Marie heeft *de* schat van *de* kat.
- b. Jan bewonderde *de* schat van een piraat.  
 b'. Jan bewonderde een schat van *de* piraat.  
 b''. Jan bewonderde *de* schat van *de* piraat.

Another difference between the two constructions in (196) is that the binominal *N van een N* construction in (196a) cannot be split, whereas the PP-modifier in construction (196b) can be separated from the noun *schat* 'treasure' by means of PP-over-V or topicalization. This is shown in (198).

- (198) a. #dat Marie een schat heeft van een kat.  
 a'. #Van een kat heeft Marie een schat.
- b. dat Jan een schat bewonderde van een piraat.  
 b'. Van een piraat bewonderde Jan een schat.

Now that we have seen that the binominal construction in (196a) differs from the modified noun phrase in (196b), we will investigate the former in more detail. Keep in mind that the judgments given in the examples below only reflect the metaphoric use of the construction; occasionally, the given strings are acceptable under the



modification interpretation, that is, with a *van*-PP modifying the first noun, but this will not be indicated.

*I. The relation between the two nouns (number agreement between the two nouns)*

The most conspicuous property of the *N van een N* construction is that, as a general rule, the two nouns agree in number: when  $N_1$  is singular,  $N_2$  must be singular as well; when  $N_1$  is plural,  $N_2$  must also be plural. This is illustrated in (199).

- (199) a. een schat van een kat [ ... sg ... sg ... ]  
           a treasure of a cat  
       b. schatten van katten [ ... pl ... pl ... ]  
           treasures of cats  
       c. \*een schat van katten [ ... sg ... pl ... ]  
           a treasure of cats  
       d. \*schatten van een kat [ ... pl ... sg ... ]  
           treasures of a cat

As is shown in (200), the *N van een N* construction resembles in this respect the copular construction, in which number agreement between the subject and the predicative noun phrase is generally obligatory as well; see Section 8.2, sub IV, for some exceptions. This supports the idea that the two nouns in the *N van een N* construction are in a predicative relation.

- (200) a. Die kat is een schat. [ ... sg ... sg ... ]  
           that cat is a treasure  
       b. Die katten zijn schatten. [ ... pl ... pl ... ]  
           those cats are treasures  
       c. ??Die katten zijn een schat. [ ... pl ... sg ... ]  
           those cats are a treasure  
       d. \*Die kat is schatten. [ ... sg ... pl ... ]  
           that cat is treasures

Occasionally, however, a predicative singular noun can be predicated of a plural subject, as in (201a); this is especially the case when the predicate is a mass noun, as in (201b). It has been claimed in Bennis et al. (1998) that, for at least some people, the corresponding *N van een N* constructions in the primed examples are also acceptable (to various degrees). If the primed examples are really grammatical (we were not able to find any examples of this sort on the internet), this stresses the similarity of the *N van een N* and the copular construction, and hence supports the idea that  $N_1$  and  $N_2$  are in a predicative relation in the *N van een N* construction.

- (201) a. Die feiten zijn een ramp.                      b. Die voetbalvandalen zijn tuig.  
           those facts are a disaster                      those hooligans are scum  
       a'. %die ramp van een feiten                      b'. %dat tuig van een voetbalsupporters  
           that disaster of a facts                              that scum of a hooligans

It has also been claimed that examples like (202b), in which  $N_2$  is a mass noun, are at least marginally possible for some speakers (we found one example on the internet). However, the corresponding copular construction is absolutely ungram-

matical. It must be noted, however, that in English, singular mass nouns that trigger plural agreement on the finite verb (like *the police* in *The police are coming*) can occur as the subject in a copular construction with a plural nominal predicate: *The police are idiots*. When a mass noun triggers singular agreement on the finite verb, on the other hand, this is impossible: \**The government is/are idiots*. The unacceptability of Dutch examples like (202a) may therefore be due to the fact that all Dutch mass nouns trigger singular agreement on the finite verb.

- (202) a. \*De regering is/zijn idioten.  
           the government is/are idiots  
       b. %die idioten van een regering  
           those idiots of a government

## II. The semantic head of the construction

A hotly debated issue with respect to the *N van een N* construction is whether  $N_1$  or  $N_2$  is the semantic head of the construction. The fact that in constructions like (203a), the *N van een N* construction can be replaced a noun phrase headed either by  $N_1$  or by  $N_2$  has given rise to the idea that the construction is ambiguous and that either of the two nouns can function as the semantic head of the construction.

- (203) a. Jan en Ruud zijn twee schatten van katten.  
           Jan and Ruud are two treasures of cats  
       b. Jan en Ruud zijn twee schatten.  
       c. Jan en Ruud zijn twee katten.

This conclusion seems to be mistaken, however, since the acceptability of (203b) is just due to the fact that the noun phrase *twee schatten* is used as a (metaphoric) predicate, just as in the *N van een N* construction. When the binominal phrase is used as an argument, as in (204), the direct object *twee schatten* in (204b) cannot be construed metaphorically, but must refer to entities that are part of the regular denotation set of the noun *schat* 'treasure'; as a result (204b) refer to a different state-of-affairs than (204c). The fact that (204c) can be used to refer to the same state-of-affairs as (204a), on the other hand, shows unambiguously that it is  $N_2$  that acts as the semantic head of the *N van een N* construction.

- (204) a. Zij heeft/kocht twee schatten van katten.  
           she has/bought two treasures of cats  
       b. #Zij heeft/kocht twee schatten.  
       c. Zij heeft/kocht twee katten.

## III. The syntactic head of the construction (number agreement with the finite verb)

Since the two nouns in the *N van een N* construction generally agree in number, it is hard to say which of the two nouns triggers agreement on the finite verb. In order to determine that, we have to take recourse to the more exceptional and perhaps disputable cases in (201b) and (202b). Our own judgments suggest that non-linguistic factors may be the determining factor when we are dealing with a singular  $N_1$ : in (205a) singular agreement seems to be preferred, whereas in (205a') it is plural agreement that is preferred. In examples like (205b), in which  $N_1$  is plural, we

always seem to have plural agreement. The data in (205) show that the fact that  $N_2$  is the semantic head of the construction does not necessarily imply that it is also the syntactic head of the construction; cf. the discussion in 4.1.1.2, where we reached a similar conclusion for the quantificational binominal construction.

- (205) a. Die ramp van een feiten <sup>%</sup>komt/\*komen zeer ongelegen.  
           that disaster of a facts    is/are           very inconvenient  
       a'. Die ramp van een feiten <sup>%</sup>staan/\*<sup>?</sup>staat in iedere grammatica.  
           that disaster of a facts    are/is           in every grammar  
       b. Die idioten van een regering <sup>?</sup>zijn/\*is nu helemaal gek geworden.  
           those idiots of a government are/is   now completely mad become

#### IV. Articles and other determiners preceding $N_1$ (gender agreement)

Another way to determine the syntactic head of the construction is by considering what determiner the *N van een N* construction takes. If the definite determiner agrees in gender with  $N_1$  we conclude that  $N_1$  is the syntactic head of the construction, and when it agrees with  $N_2$  we conclude that  $N_2$  is the syntactic head. Unfortunately, we cannot show this on the basis of the definite articles *de* and *het*, since we have already seen in (197a) that definite articles cannot be used in the *N van een N* construction. Gender agreement can, however, also be illustrated by means of demonstrative pronouns: the demonstrative *die* 'that/those' is non-neuter and/or plural, whereas the demonstrative *dat* 'that' is singular neuter.

##### (206) • Demonstrative pronouns in singular *N van een N* constructions

- a. die<sub>[-neuter]</sub>    schat<sub>[-neuter]</sub>   van een kat<sub>[-neuter]</sub>  
    that        treasure   of   a cat  
 b. dat<sub>[+neuter]</sub>   vod<sub>[+neuter]</sub>   van een schrift<sub>[+neuter]</sub>  
    the         rag       of   an exercise book  
 c. <sup>%</sup>die<sub>[-neuter]</sub>   schat<sub>[-neuter]</sub>   van een kind<sub>[+neuter]</sub>  
    the         treasure   of   a child  
 c'. <sup>%</sup>dat<sub>[+neuter]</sub>   schat<sub>[-neuter]</sub>   van een kind<sub>[+neuter]</sub>  
 d. <sup>%</sup>dat<sub>[+neuter]</sub>   vod<sub>[+neuter]</sub>   van een roman<sub>[-neuter]</sub>  
    the         rag       of   a book  
 d'. \*die<sub>[-neuter]</sub>   vod<sub>[+neuter]</sub>   van een roman<sub>[-neuter]</sub>

##### (207) • Demonstrative pronouns in plural *N van een N* constructions

- a. die    schatten   van katten  
    those treasures of   cats  
 b. die   vodden   van schriften  
    those rags     of   exercise books  
 c. die   vodden   van romans  
    those rags     of   novels

The examples in (206a&b) and (207) show that the demonstratives can readily be used when the two nouns select the same demonstrative, that is, when they both select *die* or *dat*. According to some speakers the mixed singular examples are excluded. Other speakers do accept at least some of these examples. In the case of (206c&c'), judgments appear to differ among these speakers: some prefer the

primeless example, in which the demonstrative agrees with  $N_1$  but not with  $N_2$ , whereas others prefer the primed example, in which the demonstrative agrees with  $N_2$ . The judgments on the 9d)-examples in (206), on the other hand, seem clearer: the primed example is generally rejected, whereas the primeless example is accepted by at least some speakers. Similar judgments have been collected with the possessive pronouns *onze*<sub>[-neuter,+sg]</sub> ‘our’ and *ons*<sub>[+neuter,+sg]</sub> ‘our’ in (208). We refer the reader to Everaert (1992) for a detailed discussion.

(208) • The possessive pronoun *ons/onze* ‘our’

- a. % *Onze*<sub>[-neuter]</sub> *draak*<sub>[-neuter]</sub> *van een toneelstuk*<sub>[+neuter]</sub> *is uitgevoerd.*  
     our        dragon        of a play        has.been performed
- a. % *Ons*<sub>[+neuter]</sub> *draak*<sub>[-neuter]</sub> *van een toneelstuk*<sub>[+neuter]</sub> *is uitgevoerd.*
- b. % *ons*<sub>[+neuter]</sub> *doetje*<sub>[+neuter]</sub> *van een filiaalchef*<sub>[-neuter]</sub>  
     our        softy        of a branch.manager
- b'. \**onze*<sub>[-neuter]</sub> *doetje*<sub>[+neuter]</sub> *van een filiaalchef*<sub>[-neuter]</sub>

Table 4 summarizes the above findings. Examples in which the determiner agrees in gender with the two nouns are always possible. When the two nouns differ in gender, agreement of the determiner and  $N_1$  is obligatory for at least one group of speakers. For another group of speakers, the gender of  $N_1$  affects the agreement pattern: when  $N_1$  is [-NEUTER], agreement between the determiner and  $N_2$  is preferred, but when  $N_1$  is [+NEUTER], agreement of the determiner and  $N_2$  is also blocked for them. It goes without saying that those cases in which agreement is entirely absent give rise to the most degraded results, which is not reflected by the judgments in the table.

Table 4: Gender agreement in singular N van een N constructions

	N1	N2	AGREEMENT WITH	JUDGMENT		
				GROUP I	GROUP II	GROUP III
DET <sub>[-neuter]</sub>	-neuter	-neuter	$N_1$ and $N_2$	O.K	O.K	O.K
	-neuter	+neuter	$N_1$	*	?	*
	+neuter	-neuter	$N_2$	*	*	*
	+neuter	+neuter	no agreement	*	*	*
DET <sub>[+neuter]</sub>	+neuter	+neuter	$N_1$ and $N_2$	O.K	O.K	O.K
	+neuter	-neuter	$N_1$	*	?	*
	-neuter	+neuter	$N_2$	*	*	?
	-neuter	-neuter	no agreement	*	*	*

To conclude this discussion of agreement, we want to point out that the set of determiners preceding the *N van een N* construction is rather limited. The demonstratives *die/dat* in (206) and (207) above, for example, do not really have a deictic function, but rather seem to express a kind of affective meaning, as can also be found in, for example, *die Jan toch!*, which is said of Jan when he is doing/saying something special and the speaker wants to express his approval or (mild) disapproval of what Jan is doing/saying. As is shown by (209a), using demonstratives in their deictic function generally leads to a bad result, just like the use of the definite article does. Only in very special contexts are “true”

demonstratives possible. An interrogative example like (209b), for instance, seems possible provided that the speaker is, for instance, hugging the cat in question thus showing that he himself is fond of it, but not when he is just pointing at it. In other words, (209b) is only possible when used as a kind of rhetorical question.

- (209) a. <sup>??</sup>Jan bekeek die schatten van katten (en Marie bekeek deze).  
 Jan looked.at those treasures of cats and Marie looked.at those  
 b. En wat vind je van deze schat van een kat?  
 and what consider you of this treasure of a cat  
 ‘And, what do you think of this wonderful cat?’

The fact that the *N van een N* construction conveys a strong personal evaluation of the referent of the construction may also account for the fact that first person possessive pronouns are more commonly used in the construction than the second or third person ones. When acceptable, the use of second and third person possessive pronouns generally conveys an ironic message; the speaker of (210b), for example, confronts the hearer with a fact that is not compatible with the description of the cats as being “schatten”.

- (210) a. Mijn/<sup>\*?</sup>jouw/<sup>\*?</sup>haar schatten van katten zijn ziek.  
 my/your/her treasures of cats are ill  
 b. Mijn/jouw/haar schatten van katten hebben het vlees weer eens gestolen.  
 my/your/her treasures of cats have the meat again stolen  
 ‘Those nice cats of yours stole the meat from the pan again.’

Due to restrictions like these, the set of determiners preceding the *N van een N* construction is largely restricted to the cases discussed above and the indefinite articles *een*/Ø and derivatives of them like *zo’n* ‘such a’, *geen* ‘no’ and *wat een* ‘what a’. Some examples involving these indefinite determiners are given in (211).

- (211) a. Ruud is een schat van een kat.  
 Ruud is a treasure of a cat  
 a’. Jan en Ruud zijn Ø schatten van katten.  
 Jan and Ruud are treasures of cats  
 b. Jan is zo’n schat van een kat.  
 Jan is such a treasure of a cat  
 c. Is Ruud geen schat van een kat?  
 Is Ruud no treasure of a cat  
 ‘Isn’t Ruud a wonderful cat?’  
 d. Wat een schat van een kat!  
 what a treasure of a cat  
 ‘What a wonderful cat!’

#### *V. Modification of the nouns*

Modification of the nouns in the construction is subject to various restrictions. Inserting an attributive adjective immediately before *N*<sub>2</sub>, for example, is impossible; the only exception are classifying adjectives in collocations like *Cyperse kat* ‘tabby’ in (212c).

- (212) a. \*een schat van een vriendelijke kat  
           a treasure of a kind cat  
       b. ??een schat van een oude kat  
           a treasure of an old cat  
       c. een schat van een Cyperse kat  
           a treasure of a tabby

Using an attributive adjective modifying  $N_1$  is possible, but generally these modifiers are amplifying or affective in nature and do not attribute a property to  $N_1$ , which is of course not surprising given that  $N_1$  is not referential in nature.

- (213) a. een grote schat van een kat  
           a big treasure of a cat  
           ‘a very nice cat’  
       b. een lelijk serpent van een hond  
           an ugly serpent of a dog  
           ‘a very nasty dog’

According to some, an attributive adjective preceding  $N_1$  can also be used to modify  $N_2$ , which would be compatible with the fact that it is  $N_2$  that acts as the semantic head of the construction. Some examples, taken from Den Dikken (1995b), are given in (214).

- (214) a. %een roodharig<sub>[+neuter]</sub> slagschip<sub>[+neuter]</sub> van een vrouw<sub>[-neuter]</sub>  
           a red.haired battleship of a woman  
           ‘a fierce red-haired woman’  
       a’. \*een roodharige<sub>[-neuter]</sub> slagschip<sub>[+neuter]</sub> van een vrouw<sub>[-neuter]</sub>  
       b. %een roodharige<sub>[-neuter]</sub> ijsberg<sub>[-neuter]</sub> van een wijf<sub>[+neuter]</sub>  
           a red.haired iceberg of a bitch  
           ‘a frigid red-haired bitch’  
       b’. %een roodharig<sub>[+neuter]</sub> ijsberg<sub>[-neuter]</sub> van een wijf<sub>[+neuter]</sub>

Insofar as the examples in (214) are acceptable, it is clear that *roodharig* must be modifying  $N_2$ . Note that the data in (214) are in accordance with the findings with respect to gender agreement in Table 4: the (a)-examples show that when  $N_1$  is neuter and  $N_2$  is non-neuter, the adjective must agree with  $N_1$ , whereas the (b)-examples show that when  $N_1$  is non-neuter and  $N_2$  is neuter, speakers seem to vary with respect to the noun that triggers agreement — for some speakers it is  $N_1$ , as in (214b), whereas for others it is  $N_2$ , as in (214b’). So again, we have to conclude that the feature [+NEUTER]  $N_1$  blocks gender agreement with  $N_2$  for all speakers.

Although attributively used adjectives may precede  $N_1$ , postnominal modifiers cannot immediately follow it, as is shown in (215a). Probably, the impossibility to modify  $N_1$  is again due to the fact that  $N_1$  is not referential in nature. Example (215b) shows that postmodifiers following  $N_2$  are possible, but in these cases we cannot immediately decide whether the PP modifies  $N_2$  or the complete *N van een N* construction.

- (215) a. een boom (\*daar/\*in de tuin) van een kerel  
 a tree there/in the garden of a fellow  
 'a big/strong fellow'
- b. een boom van een kerel uit Groningen  
 a tree of a fellow from Groningen

In order to find out whether the modifier in (215b) modifies  $N_2$  or the complete *N van een N* construction, we may take into account relative clauses such as those given in (216). The fact that the relative pronoun must agree in gender with  $N_2$  suggests that it is this noun that is modified, and not the complete *N van een N* construction.

- (216) a. een schat<sub>[-neuter]</sub> van een kind<sub>[+neuter]</sub> dat<sub>[+neuter]</sub>/\*die<sub>[-neuter]</sub> ziek is  
 a treasure of a child that ill is  
 'a charming child that is ill'
- b. een kren<sub>[+neuter]</sub> van een vrouw<sub>[-neuter]</sub> die<sub>[+neuter]</sub>/\*dat<sub>[+neuter]</sub> wegge<sub>[-neuter]</sub>lopen is  
 a carcass of a wife that run.away has  
 'a bitch of wife that has run away'

#### VI. The article *een* preceding $N_2$

The indefinite article preceding  $N_2$  cannot be replaced by other kinds of determiners. The indefinite article seems sensitive to the number of  $N_2$ : when  $N_2$  is singular the indefinite article is *een* 'a', and when it is plural the article has the null form.

- (217) a. Marie heeft een schat van een/\*Ø kat.  
 Marie has a treasure of a cat
- b. Marie heeft twee schatten van Ø/%een katten.  
 Marie has two treasures of Ø/a cats

The "%" preceding *een* in (217b) is due to the fact that whereas Bennis et al. (1998) claim that examples like *schatten van een katten* are possible, other speakers consider the result highly marked at best. Still, the  $N_{pl}$  *van een N<sub>pl</sub>* construction is fully acceptable for all speakers in exclamative contexts like (218a), in which case both nouns are preceded by the indefinite article *een*. As shown in (218b), such a combination of *een* and a plural noun is not restricted to *N van een N* constructions of this kind, but are typical of this kind of exclamative constructions.

- (218) a. Een schatten van een katten dat hij heeft!  
 a treasures of a cats that he has
- b. Een boeken dat hij heeft!  
 a books that he has

This suggests that the indefinite article and  $N_2$  can simply be analyzed as a noun phrase. There is, however, a problem with this conclusion; *een* is also possible with  $N_2$ s that normally cannot be preceded by an indefinite article. The most conspicuous case involves proper nouns: normally, a proper noun like *Marie* is not preceded by an indefinite article (\**een Marie*), yet in (219) it is obligatorily present.

- (219) a. die schat van \*(een) Marie  
           that treasure of a Marie  
       b. dat serpent van \*(een) Marie  
           that snake of a Marie

The same can perhaps be shown on the basis of substance nouns, which normally cannot be preceded by an indefinite article either: *een pracht van een wijn/kaas* (lit.: a beauty of a wine/cheese). However, a caveat is in order, since speakers tend to no longer construe the  $N_2$ s in such cases as substance nouns. Instead, the noun *wijn* will, for instance, be interpreted as referring to a certain kind of  $N_2$ , and the  $N_2$  *kaas* as referring to an actual object.

There are also proper nouns that can be preceded by a definite, but not by an indefinite article, for example *de/\*een Westerkerk* or *het/\*een paleis op de Dam*. Again, these proper nouns must be preceded by *een* in the *N van een N* construction; note that the definite article, which is normally present, cannot be used in these binominal constructions.

- (220) a. die pracht van een Westerkerk  
           that beauty of a Westerkerk  
       b. dat monster van een Paleis op de Dam  
           that monster of a Paleis op de Dam

The facts in (219) and (220) have led to the suggestion that *een* is actually not part of the noun phrase headed by  $N_2$ , but is present to perform some other function; see Bennis et al. (1998) for discussion.

### VII. The preposition *van*

Since the preposition *van* cannot be replaced by any other preposition, it has been suggested that it is a spurious preposition. Alexiadou et al. (2007: 246) suggest that this can further be motivated by the fact that, unlike true *van*-PPs, the sequence *van* + noun phrase cannot undergo pronominalization. Another fact that may point in this direction is that this sequence cannot be moved independently of the sequence preceding *van*.

- (221) a. Jan is een boom van een kerel.  
           Jan is a tree of a fellow  
       b. \*Jan is een boom ervan.  
           Jan is a tree there-of

Bennis et al. (1998) also adopt the claim that *van* is a spurious preposition and they have suggested that its syntactic function is to signal the predicative relation between  $N_1$  and  $N_2$ ; they claim that, in a sense, *van* is comparable to the copula *zijn* 'to be' in a copular construction.

### VIII. Syntactic distribution

The *N van een N* construction can be used in all regular NP-positions, that is, both as an argument and as a nominal predicate. In (222), we give examples in which the construction functions as a subject, a direct object, an indirect object, the complement of a preposition, and a predicate in a copular construction.



- (222) a. Zo'n schat van een kind verdient een lolly. [subject]  
 such a treasure of a child deserves a lollipop
- b. Ik heb een pracht van een vaas gekocht. [direct object]  
 I have a beauty of a vase bought
- c. Jan geeft zo'n schat van een kind graag een kusje. [indirect object]  
 Jan gives such a treasure of a child gladly a kiss
- d. Iedereen heeft respect voor zo'n boom van een vent. [complement of P]  
 everyone has respect for such a tree of a fellow  
 'Everybody respects such a big/strong fellow.'
- e. Jan en Ruud zijn schatten van katten. [nominal predicate]  
 Jan and Ruud are treasures of cats

#### 4.2.2. The interrogative *wat voor* 'what kind of' construction

This section will discuss the so-called *wat voor* construction in (223). Section 4.2.2.1 starts by briefly discussing the meaning of the *wat voor* construction, and Section 4.2.2.2 will focus on its internal structure. One of the typical properties of the *wat voor* phrase is that it can be split by moving the interrogative pronoun *wat* to clause-initial position while stranding the *voor NP* string, as in (223b). Section 4.2.2.3 will discuss this so-called *wat voor* split in detail.

- (223) a. Wat voor een boek/boeken lees je?  
 what for a book/books read you  
 'What kind of book/books are you reading?'  
 b. Wat lees je voor een boek/boeken?

Before we start our discussion we want to point out that the availability of both the unsplit and the split pattern clearly distinguishes example (223b) from the seemingly similar construction in (224a): the unacceptability of (224b) suggests that *wat* and *aan boeken* do not form a constituent.

- (224) a. Wat heeft Jan aan boeken gekocht?  
 what has Jan on books bought  
 'What did John buy in the way of books?'  
 b. \*Wat aan boeken heeft Jan gekocht?

##### 4.2.2.1. The meaning of the *wat voor* construction

The complex phrase *wat voor (een)* 'what kind of' can be classified together with the *wh*-word *welk(e)* 'which' as interrogative demonstrative pronouns; cf. Section 5.2.3.1.1. *Wat voor N* phrases differ from *welk(e) N* phrases in °D-linking: whereas the latter instruct the addressee to select certain referents from some referent set previously established in the discourse, the former do not presuppose such a pre-established set and simply instruct the addressee to provide a further characterization of the set denoted by the *N* in question. In other words, a felicitous answer to a *wat voor N* question involves a noun phrase denoting a subset of *N*, whereas a felicitous answer to a *welk(e) N* question involves a noun phrase referring to one or more discourse entities for which the predicate in the question holds. A prototypical answer to the *wat voor* question in (225a) is therefore something like (225a'), in which the relevant set of shoes is narrowed down to shoes that are blue

and have high heels. This answer would not be appropriate for the question in (225b), since in this case the speaker implies that the relevant set of shoes is already identified; the speaker is specifically asking for the identification of the relevant entity, which is felicitously provided by the answer in (225b').

- (225) a. Wat voor een schoenen heb je gekocht?  
 what for a shoes have you bought  
 'What kind of shoes did you buy?'  
 a'. Blauwe met hoge hakken.  
 blue with high heels  
 'Blue ones with high heels.'  
 b. Welke schoenen heb je gekocht?  
 which shoes have you bought  
 'Which shoes did you buy?'  
 b'. Die blauwe met hoge hakken.  
 those blue with high heels  
 'Those blue ones with high heels.'

Out of the blue, (225b') could not be used as an answer to the question in (225a), since it would wrongly presuppose that the person who is asking the question has the necessary background information to determine the referent of the noun phrase. However, if the person who is answering the question provides an additional hint, for instance by pointing to a certain pair of shoes, the answer may become felicitous. The person who answers can also provide additional linguistic clues indicating that the relevant set is or should be known to the speaker: the adverb *natuurlijk* 'of course' in, for instance, *die blauwe met hoge hakken natuurlijk* may provide such a clue.

In short, we can say that whereas a *welk(e) N* question requires as an answer a noun phrase with a unique referent taken from a presupposed set, the *wat voor N* question merely asks for a further restriction of the set denoted by N (which is not known to the speaker). This distinction also holds when the *wat voor* phrase is used predicatively. A *wat voor N* question like (226a) asks for a further specification of the property already ascribed to the subject of the clause (viz. the property of being a book). A *welk(e) N* question like (226b), on the other hand, asks for unambiguous identification of the book. This accounts for the difference in definiteness of the noun phrases that are given as an answer.

- (226) a. Wat voor een boek is dat?  
 what for a book is that  
 'What kind of a book is that?'  
 a'. Een boek dat ik voor mijn verjaardag heb gekregen.  
 a book that I for my birthday have got  
 'A book that has been given to me for my birthday.'  
 a''. Een roman.  
 A novel

- b. Welk boek is dat?  
which book is that
- b'. Het boek dat ik voor mijn verjaardag heb gekregen.  
the book that I for my birthday have got  
'The book that has been given to me for my birthday.'
- b''. *De zondvloed* van Jeroen Brouwers.  
*De zondvloed* by Jeroen Brouwers

#### 4.2.2.2. Internal structure and distribution of the *wat voor* construction

The *wat voor* construction is a binominal construction that obligatorily contains the preposition *voor* 'for'. The first noun in the phrase ( $N_1$ ) is always the interrogative pronoun *wat* 'what'. The second noun ( $N_2$ ) can be a singular or plural count noun, a non-count noun, or the existentially quantified personal pronouns *iets* 'something' or *iemand* 'someone'.  $N_2$  is mostly optionally preceded by *een*, although this seems to be a less favored option when  $N_2$  is a quantifier. Some examples are given in (227).

- (227) a. [Wat voor (een) boek] lees jij? [singular count noun]  
what for a book read you  
'What kind of book do you read?'
- b. [Wat voor (een) boeken] lees jij? [plural count noun]  
what for a books read you  
'What kind of books do you read?'
- c. [Wat voor (een) koffie] drink jij? [non-count noun]  
what for a coffee drink you  
'What kind of coffee are you drinking?'
- d. [Wat voor (°een) iets/iemand] is dat? [quantified pronoun]  
what for a something/someone is that  
'What kind of thing/person is that?'

As pointed out in 4.2.2.1, the *wat voor* questions in (227) request a further specification of  $N_2$ . The answer to (227a) could be, e.g., a children's book or a textbook in linguistics. Below, we will discuss the syntactic properties of the construction.

##### 1. The string *wat voor (een) N* is a constituent

The fact that the string *wat voor een N* occupies the initial position of the clause in the examples in (227) above suggests that we are dealing with a phrase. This conclusion is further supported by the fact illustrated in (228) that *wat voor* phrases can be coordinated (the °constituency test).

- (228) Wat voor een vrouw en wat voor een man heb jij ontmoet?  
what for a woman and what for a man have you met  
'What kind of woman and what kind of man did you meet?'

The fact that the *wat voor* phrases in (227) can also be split (the so-called *wat voor* split) does not contradict this claim, since the split patterns can be and generally are analyzed as involving subextraction of *wat*, as indicated in (229).

- (229) a. Wat<sub>i</sub> lees jij [<sub>t<sub>i</sub></sub> voor een boek]?  
 b. Wat<sub>i</sub> lees jij [<sub>t<sub>i</sub></sub> voor een boeken]?  
 c. Wat<sub>i</sub> drink jij [<sub>t<sub>i</sub></sub> voor een koffie]?  
 d. Wat<sub>i</sub> is dat [<sub>t<sub>i</sub></sub> voor iets/iemand]?

Evidence in favor of this analysis comes from the fact that the split is possible only in certain syntactic configurations. For example, when the *wat voor* phrase is the complement of a preposition, as in (230), the split is impossible because subextraction from an NP-complement of a preposition is generally excluded. Since much more can be said about the syntactic restrictions on the *wat voor* split, we will postpone further discussion of this to Section 4.2.2.3.

- (230) a. [<sub>PP</sub> Op [<sub>NP</sub> wat voor een bericht]] wacht je?  
           for     what for a message     wait you  
           ‘For what kind of message are you waiting?’  
 b. \*Wat<sub>i</sub> wacht je [<sub>PP</sub> op [<sub>NP</sub> <sub>t<sub>i</sub></sub> voor een bericht]]?

## II. The semantic head of the construction

The examples in (227) suggest that it is N<sub>2</sub> that satisfies the semantic selection restrictions of the verb; this is further supported by the fact that the noun *boek(en)* ‘book(s)’ in (227a&b) cannot be replaced by a noun like *sigaar*, which would violate these selection restrictions: \**Wat voor een sigaar/sigaren lees je?* ‘what kind of cigar(s) are you reading?’. It is therefore plausible to assume that N<sub>2</sub> is the semantic head of the construction, not the interrogative pronoun *wat*. This assumption can be further supported by the binding data in (231), in which coreference is indicated by means of italics.

- (231) a. *Wie* hebben *elkaar* gebeten?  
           who have each.other bitten  
           ‘Who bit each other?’  
 b. \**Wat* hebben/heeft *elkaar* gebeten?  
           what have/has each.other bitten  
 c. *Wat voor honden* hebben *elkaar* gebeten?  
           what for dogs have each.other bitten  
           ‘What kind of dogs bit each other?’  
 d. \**Wat voor hond* heeft *elkaar* gebeten?  
           what for dog has each.other bitten

The examples in (231a&b) show that the interrogative pronouns *wie* ‘who’ and *wat* ‘what’ differ in that the former can act as the antecedent of the reciprocal pronoun *elkaar* ‘each other’, whereas the latter cannot (a difference which may be related to the fact that *wat* triggers singular agreement on the finite verb, whereas *wie* may trigger either singular or plural agreement; see the discussion under III). The acceptability of example (231c) therefore suggests that it is N<sub>2</sub> that acts as the antecedent of *elkaar*; this is confirmed by the unacceptability of example (231d), where the singular noun *hond* cannot be the antecedent of *elkaar*. These facts support the claim that it is N<sub>2</sub> that functions as the semantic head of the *wat voor* phrase.

*III. The syntactic head of the construction*

The examples in (232) show that the interrogative pronoun *wat* ‘what’ differs from *wie* ‘who’ in that it obligatorily triggers singular agreement on the finite verb.

- (232) a. Wat ligt/\*liggen er op de grond?  
           what lies/lie there on the floor  
       b. Wie ligt/liggen er op de grond?  
           who lies/lie there on the floor

Consequently, if *wat* functions as the syntactic head of the construction, we would wrongly expect that a *wat voor* phrase would trigger singular agreement on the finite verb as well. The data in (233) therefore suggest that  $N_2$  is not only the semantic but also the syntactic head of the construction.

- (233) a. Wat voor een man loopt daar?  
           what for a man walks there  
           ‘What kind of man is walking there?’  
       b. Wat voor een mannen lopen/\*loopt daar?  
           what for a men walk/walks there  
           ‘What kind of men are walking there?’

*IV. The status of the string wat voor een*

The conclusion that  $N_2$  is both the semantic and the syntactic head of the *wat voor* phrase has given rise to the assumption that the string *wat voor een* is a complex modifier. Apart from the fact that the interrogative pronoun *wat* cannot be replaced by any other pronoun, there are two arguments that support this assumption: the element *een* does not behave like a regular indefinite article, and the element *voor* lacks the case assigning property of prepositions. A problem for this assumption is, however, that *wat* can be extracted from the string *wat voor een*, which would be unexpected in view of the °Lexical Integrity Constraint: when we are indeed dealing with a lexicalized form, extraction of *wat* should be blocked.

*A. The article een*

Support for the assumption that the *wat voor* phrase is a complex modifier comes from the fact that *een* does not act like a regular indefinite article, which is clear from the fact, illustrated in (234a), that it may precede both singular and plural  $N_2$ s, whereas indefinite articles preceding a plural noun normally have a null form. As a matter of fact, it may be the case that the null form may also appear in the *wat voor* construction (alternatively, of course, one may assume that no article is present at all), but the data in (234b) then show that this null form is not restricted to plural noun phrases, as would normally be the case.

- (234) a. Wat voor een hond/honden heb jij?  
           what for a dog/dogs have you  
           ‘What kind of dog/dogs do you have?’  
       b. Wat voor hond/honden heb jij?  
           what for dog/dogs have you  
           ‘What kind of dog/dogs do you have?’

It is not entirely clear whether *een* can also precede  $N_2$  when the latter is an existential pronoun (which would be normally excluded: *\*een iets/iemand*). Our intuitions are that this is impossible when  $N_2$  is the [-HUMAN] pronoun *iets* ‘something’, but at least marginally possible when it is the [+HUMAN] pronoun *iemand* ‘someone’. This intuition seems to be confirmed by a Google search performed in June 2008: whereas the search on the string *[wat voor een iets]* resulted in only 3 *wat voor* constructions, the search on *[wat voor een iemand]* yielded 17 results. It can further be noted that in most of these cases the *wat voor* phrase was used as the predicate in copular constructions like *wat voor een iets is dat?* ‘what kind of thing is that?’ and *wat voor een iemand ben jij?* ‘what kind of person are you?’

- (235) a. Wat voor (\*<sup>?</sup>een) iets zou jij willen hebben?  
 what for a something would you want have  
 ‘What kind of thing would you like to have?’  
 b. Wat voor (<sup>?</sup>een) iemand zou jij willen uitnodigen?  
 what for a someone would you want invite  
 ‘What kind of person would you like to invite?’

Another argument in favor of the idea that *een* is a spurious article is that it cannot be replaced by any other determiner or any other element that may occur in the left periphery of the noun phrase; replacement of *een* by, e.g., a definite article or a numeral leads to an ungrammatical result.

- (236) Wat voor \*de/\*<sup>?</sup>drie honden heb jij?  
 what for the/three dogs have you

It must be noted, however, that there is one apparent counterexample to the claim that  $N_2$  cannot be preceded by a numeral, viz., constructions involving an empty  $N_2$  licensed by <sup>o</sup>quantitative *er*, as in (237). *Een*, which is normally pronounced with a schwa, must be pronounced in this construction like the numeral *één* ‘one’, /e:n/. However, since *één* cannot be replaced by a numeral like *drie*, it seems plausible that the occurrence of *één* in (237) is due to the fact that the empty noun must be preceded by some element carrying stress. Note that examples like (237a) also occur without *er*: we found various instances of *Wat voor een wil je (hebben)?* on the internet.

- (237) a. [Wat voor één/\*drie [e]] wil jij er hebben?  
 what for a/three want you ER have  
 ‘What kind would you like to have?’  
 b. Wat wil jij er [voor één/\*drie e] hebben?

Some speakers also allow examples like (237a) without *een* being present, as shown in (238a). The split pattern in (238b), on the other hand, is consistently judged unacceptable, which might be related to the fact that the phonetic string in (238b) has a more prominent reading in which *er ... voor* functions as a pronominal PP: *Wat wil jij ervoor hebben?* ‘What do you want to have for it?’. Examples like (238a) also occur without *er*: we found various instances of *Wat voor wil je (hebben)?* on the internet.

- (238) a. %[Wat voor [e]] wil jij er hebben?  
           what for           want you ER have  
           ‘What kind would you like to have?’  
       b. \*Wat wil jij er [voor [e]] hebben?

### B. The preposition *voor*

The discussion in Subsection A suggests that *een* is a spurious indefinite article. Similarly, the preposition *voor* may not be a true preposition, which is suggested by the fact that it does not assign case. Unfortunately, this cannot be shown on the basis of Dutch since this language lacks morphological case, but we can show this on the basis of German. Whereas the German preposition *für* normally assigns accusative case, it does not assign accusative case to N<sub>2</sub> in the *was für* construction. Instead, the case of N<sub>2</sub> depends on the case of the complete *was für* phrase: when the *was für* phrase is a subject, N<sub>2</sub> has nominative case; when it is a direct object, it has accusative case; and when it is the complement of a preposition like *mit* ‘with’, it is assigned dative case. This is shown in (239).

- (239) a. Was für ein Mann<sub>nom</sub> hat das Buch gelesen? [German]  
           what for a man       has the book read  
           ‘What kind of man read the book?’  
       b. Was für einen Mann<sub>acc</sub> hat sie geheiratet? [German]  
           what for a man       has she married  
           ‘What kind of man did she marry?’  
       c. Mit was für einem Mann<sub>dat</sub> hast du gesprochen? [German]  
           with what for a man       have you spoken  
           ‘With what kind of man did you speak?’

Another fact that can perhaps be taken to show that *voor* is not a true preposition is that the string *voor* + noun phrase cannot undergo R-pronominalization, which is normally possible with *voor*-PPs.

- (240) a. Wat voor een boek is dat?  
           what for a book    is that  
       b. \*Wat ervoor is dat?  
           what for-it    is that

### C. The *wat voor split*

The conclusions in A and B that *een* is a spurious article and that *voor* is not a “true” preposition either could be seen as supporting the assumption that *wat voor een* is a complex modifier that is part of the lexicon as such: the availability of the string *wat voor* could then be accounted for by assuming that it is a reduced form of *wat voor een*. Analyses that adopt this assumption do, however, run into problems with the *wat voor split*. If *wat voor (een)* is a complex modifier, the examples in (241) would violate the Lexical Integrity Constraint, according to which parts of lexical items cannot undergo syntactic processes: in these examples, *wat* is extracted from the lexical modifier *wat voor (een)*. Assuming that *wat voor (een)* is a complex modifier therefore forces us to introduce additional mechanisms to allow

the violation of this constraint; see Corver (1990/1991) for a good overview of several proposals from the literature.

- (241) Wat heb jij voor (een) hond/honden?  
 what have you for a dog/dogs  
 'What kind of dog/dogs do you have?'

As an alternative, it has been proposed that *wat* must be considered a nominal predicate, that is, the *wat voor* construction should be analyzed like the *N van een N* construction in Section 4.2.1. Since arguing for this would lead us into a thicket of theory-internal issues of generative grammar, we cannot go into this matter here; for a discussion of this analysis, see Den Dikken (1995b) and Bennis et al. (1998), who provide more or less similar analyses for the two constructions in question.

#### V. Modification

Being an interrogative pronoun,  $N_1$ , of course, cannot be modified. Premodification of  $N_2$ , on the other hand, does not seem to be restricted. Some examples of *wat voor* phrases with an  $N_2$  modified by an attributive adjective are given in (242a&b).

- (242) a. Wat loopt daar voor (een) rare man?  
 what walks there for a strange man  
 a'. Wat voor (een) rare man loopt daar ?  
 b. Wat heb je daar voor (een) interessant pakje?  
 what have you there for an interesting parcel  
 b'. Wat voor (een) interessant pakje heb je daar?

Modification by means of a PP or a relative clause is possible as well, as is shown in (243a&b). However, in these cases, there seems to be a preference to split the *wat voor* phrase, which may be due to °focus and to the general tendency to place longer phrases in the right periphery of the clause.

- (243) a. Wat loopt daar voor (een) rare man met een stok?  
 what walks there for a strange man with a cane  
 a'. ?Wat voor (een) rare man met een stok loopt daar?  
 b. Wat heb je daar voor (een) interessant pakje in pakpapier?  
 what have you there for an interesting parcel in wrapping paper  
 b'. ?Wat voor (een) interessant pakje in pakpapier heb je daar?

Postmodification by means of a relative clause is possible, provided that a split *wat voor* phrase is used; an example is given in (244a), although it must be noted that the most likely reading of this sentence is one in which the relative clause is interpreted as an apposition. Example (244b) shows that when the *wat voor* phrase is not split, use of a relative clause leads to an unacceptable result.

- (244) a. Wat is dat voor een man die daar met een stok loopt?  
 what is that there for a man that with a cane walks  
 b. \*?Wat voor een man die daar met een stok loopt is dat?



*VI. Syntactic distribution*

The *wat voor* construction can be used in all regular NP-positions, that is, both as an argument and as a nominal predicate. In (245), we give examples in which the construction functions as a subject, a direct object, an indirect object, the complement of a preposition, and the predicate in a copular construction.

- (245) a. Wat voor een kind heeft die lolly gestolen? [subject]  
 what kind of a child has that lollipop stolen
- b. Wat heb je voor een vaas gekocht? [direct object]  
 what have you for a vase bought
- c. Wat voor een kind heeft hij die lolly gegeven? [indirect object]  
 what kind of child has he that lollipop given  
 'To what kind of child did he give a lollipop?'
- d. Op wat voor een bericht ben je aan het wachten? [complement of P]  
 for what for a message are you AAN HET wait  
 'For what kind of message are you waiting?'
- e. Wat voor een boek is dat? [nominal predicate]  
 what for a book is that  
 'What kind of book is that?'

*4.2.2.3. The wat voor split*

This section will discuss in more detail the properties of the *wat voor* split. This split is generally assumed to be the result of moving the interrogative pronoun *wat* into clause-initial position, as in (246d). Splitting the *wat voor* phrase at some other point is excluded, as is illustrated in (246b&c).

- (246) a. Wat voor een boeken heb jij gelezen?  
 what for a books have you read  
 'What kind of books did you read?'
- b. \*Wat voor een heb jij boeken gelezen?
- c. \*Wat voor heb jij een boeken gelezen?
- d. Wat heb jij voor een boeken gelezen?

It has been argued that the syntactic function of the *wat voor* phrase, along with its surface position in the clause, is relevant for the question of whether the *wat voor* split is allowed. We will review the relevant data in 4.2.2.3.1, and show that at least subjects and direct objects of various sorts of verbs allow the split, provided that they occupy their "base" position in the clause. The *wat voor* split is blocked not only by movement of the *wat voor* phrase, but also by the presence of certain other elements in the clause, such as the negative adverb *niet* 'not'. This will be discussed in 4.2.2.3.2, where we will also discuss so-called "parasitic gaps" licensed by a *wat voor* phrase.

*4.2.2.3.1. The syntactic function of the split phrase*

Whether *wat voor* split is possible depends on the syntactic function of the phrase. Below, we will show that direct objects, subjects and nominal predicates do allow the split, while indirect objects and complements of prepositional phrases do not.

Further, it will be shown that the surface position of the stranded remnant of the *wat voor* phrase (henceforth: remnant) may also bear on whether the split is possible or not. This is generally assumed to follow from the general prohibition of subextraction from a moved phrase, the so-called °freezing principle.

### I. Direct objects

The examples in (247a&b) show that direct objects may undergo *wat voor* split, but that the remnant must generally be left-adjacent to the verb(s) in clause-final position, that is, scrambling of the remnant, as in (247b), is excluded as an instantiation of the freezing effect. PP-over-V also gives rise to a degraded result: speakers of Dutch may differ somewhat on their judgments of (247c), but all agree that it is marked compared to (247a).

- (247) a. Wat<sub>i</sub> heb je gisteren [ t<sub>i</sub> voor (een) boeken] gelezen?  
           what have you yesterday for a books read  
           ‘What kind of books did you read yesterday?’  
       b. \*Wat<sub>i</sub> heb je [ t<sub>i</sub> voor (een) boeken]<sub>j</sub> gisteren t<sub>j</sub> gelezen?  
       c. <sup>%</sup>Wat<sub>i</sub> heb je gisteren gelezen [ t<sub>i</sub> voor (een) boeken]?

The only elements that may intervene between the remnant and the clause-final verb(s) are phrases that compete for the same position: (248a&b) provide examples involving, respectively, a verbal particle, *aan*, and a PP-predicate, *in de kast*. The latter example is perhaps slightly marked, but certainly not ungrammatical. Note in this connection that when °R-extraction has taken place from the PP-predicate, as in (248b’), the result is fully acceptable.

- (248) a. Wat<sub>i</sub> heb je de kinderen [ t<sub>i</sub> voor (een) boeken] aangeraden?  
           what have you the children for a books prt.-recommended  
           ‘What kind of books did you read aloud to the children?’  
       b. <sup>(?)</sup>Wat<sub>i</sub> heb je [ t<sub>i</sub> voor (een) boeken] in de kast gezet?  
           what have you for a books into the bookcase put  
           ‘What kind of books did you put into the bookcase?’  
       b’. Wat<sub>i</sub> heb je er [ t<sub>i</sub> voor (een) boeken] in gezet?  
           what have you there for a books into put  
           ‘What kind of books did you put into it?’

The examples in (249) show that inverting the order of the *wat voor* remnant and the particle or (the stranded preposition of) the PP-predicate gives rise to an ungrammatical result.

- (249) a. \*Wat<sub>i</sub> heb je de kinderen aan [ t<sub>i</sub> voor (een) boeken] geraten?  
       b. \*Wat<sub>i</sub> heb je in de kast [ t<sub>i</sub> voor (een) boeken] gezet?  
       c. \*Wat<sub>i</sub> heb je er in [ t<sub>i</sub> voor (een) boeken] gezet?

### II. Subjects

The data involving the nominative subject of the clause are more complex than the data involving the direct object. Below, we will show that the *wat voor* split is allowed in passive constructions and clauses involving an °unaccusative verb, provided that the subject occupies its base position and not the (derived) subject

position. When the construction contains a transitive or an intransitive verb, the split only seems to be possible in °expletive constructions.

#### A. Passive constructions

The nominative subject of a passive clause corresponds to the accusative object of its active counterpart. In Dutch, the subject of a passive clause can occupy two positions: either it occupies the position that is normally taken by the direct object, or it occupies the regular subject position of the clause. This can be demonstrated relatively easily by considering the passive of a ditransitive construction: in (250b), the nominative argument *het boek* follows the indirect object *de kinderen*, which suggests that it occupies the same position as the direct object in the active construction in (250a); in (250c), on the other hand, it precedes the indirect object, which suggests that it occupies the regular subject position.

- (250) a. Gisteren heeft Jan de kinderen het boek voorgelezen.  
 yesterday has Jan the children the book read.aloud  
 'Jan read the book aloud to the children yesterday.'
- b. Gisteren is de kinderen het boek voorgelezen.  
 yesterday has.been the children the book read.aloud
- c. Gisteren is het boek de kinderen voorgelezen.  
 yesterday has.been the book the children read.aloud

If the nominative noun phrase in (250b) indeed occupies the same position as the direct object in (250a), it does not come as a surprise that the *wat voor* split of a subject is possible in (251b); after all, the same thing holds for the direct object in (251a). Given that the *wat voor* phrase in (250c) is generally assumed to have been moved into the regular subject position, the freezing principle correctly predicts that the *wat voor* split is impossible in (251c).

- (251) a. Wat<sub>i</sub> heeft Jan de kinderen gisteren [<sub>i</sub> voor een boek] voorgelezen?  
 what has Jan the children yesterday for a book read.aloud
- b. Wat<sub>i</sub> is de kinderen gisteren [<sub>i</sub> voor een boek] voorgelezen?  
 what has.been the children yesterday for a book read.aloud
- c. \*Wat<sub>i</sub> is [<sub>i</sub> voor een boek]<sub>j</sub> de kinderen gisteren t<sub>j</sub> voorgelezen?  
 what has.been for a book the children yesterday read.aloud

#### B. Unaccusative verbs

It has been argued that, just like the subject of a passive construction, the subject of an unaccusative verb is a "derived" subject. Given the discussion of the passive construction in A above, this can be readily shown in the case of dyadic unaccusative verbs. When the nominative argument follows the (dative) object, as in (252a), the *wat voor* split is possible, hence it is plausible to assume that it occupies a position that is comparable to that of a direct object. When it precedes the object, as in (252b), the *wat voor* split is excluded, which suggests the working of the freezing principle; in other words, the subject has been moved from its original position in (252a) into the regular subject position of the clause.

- (252) a. Wat<sub>i</sub> zouden hem nou [<sub>NP</sub> t<sub>i</sub> voor een boeken] bevallen?  
 what would him PRT for a books please  
 ‘What kind of books would please him?’  
 b. \*Wat<sub>i</sub> zouden [<sub>NP</sub> t<sub>i</sub> voor een boeken]<sub>j</sub> hem nou t<sub>j</sub> bevallen?

When we are dealing with a monadic unaccusative verb, the *wat voor* split is possible also, but only in the expletive construction. This can be accounted for by assuming that in expletive constructions, the regular subject position is filled by the expletive *er*, so the nominative argument must occupy its base position in (253a). Example (253b) is ungrammatical since *er* must be present when the indefinite subject remains in its base position. Example (253c), finally, is ungrammatical since the nominative argument has been moved into the regular position, and hence invokes a violation of the freezing principle.

- (253) a. Wat<sub>i</sub> zijn er gisteren [<sub>NP</sub> t<sub>i</sub> voor mensen] aangekomen?  
 what are there yesterday for people prt.-arrived  
 ‘What kind of people have arrived yesterday?’  
 b. \*?Wat<sub>i</sub> zijn gisteren [<sub>NP</sub> t<sub>i</sub> voor mensen] aangekomen?  
 c. \*Wat<sub>i</sub> zijn [<sub>NP</sub> t<sub>i</sub> voor mensen]<sub>j</sub> gisteren t<sub>j</sub> aangekomen?

Note, however, that there is a caveat in order here. In (253) and in the examples below, we abstract away from the fact that expletive *er* can be dropped when certain adverbial phrases are present. A typical example involves the place adverb *daar* ‘there’ in (254); see Section 8.1.4 for discussion. The fact that the *wat voor* remnant is placed after the adverb *daar* suggests that in this example the indefinite subject also occupies its base position.

- (254) Wat zijn (er) daar voor mensen aangekomen?  
 what are there there for people prt.-arrived  
 ‘What kind of people have arrived there?’

The *wat voor* split can be sensitive to the semantic type of the predicate, especially the distinction between °stage-level and individual-level predicates. Whereas the former often allow the expletive construction, the latter do not due to the fact that they block an existential reading of the subject noun phrase; see Hartmann (2008: §1.4) for a review of the literature. Therefore, it is not surprising that in a copular construction (which is always an unaccusative construction), the adjectival predicate determines whether *wat voor* split is possible or not. A typical stage-level predicate like *beschikbaar* ‘available’ allows the *wat voor* split whereas an individual-level predicate like *waterdicht* ‘waterproof’ does not; see Section 5.1.5.1.3, sub I) for exceptions. Example (255b) with *er* is unacceptable because the individual-level predicate *waterdicht* does not license an existential reading of the noun phrase *schoenen* ‘shoes’ and is therefore not possible in an expletive construction. Finally, (255b’) without *er* is ungrammatical due to the freezing principle.

- (255) a. Wat<sub>i</sub> zijn er [<sub>NP</sub> t<sub>i</sub> voor boeken] beschikbaar.  
 what are there for books available  
 'What kind of books are available?'  
 b. \*Wat<sub>i</sub> zijn er [<sub>NP</sub> t<sub>i</sub> voor schoenen] waterdicht?  
 what are there for shoes waterproof  
 'What kind of shoes are waterproof?'  
 b'. \*Wat<sub>i</sub> zijn [<sub>NP</sub> t<sub>i</sub> voor schoenen]<sub>j</sub> t<sub>j</sub> waterdicht?

### C. Intransitive verbs

Den Besten (1985) has claimed that regular intransitive verbs do not allow the *wat voor* split. It seems, however, that this is an overgeneralization. As with monadic unaccusative verbs, the *wat voor* split seems possible when expletive *er* is present; the split in (256a) is at worst slightly marked and certainly gives rise to a much better result than the split in (256b).

- (256) a. <sup>(?)</sup>Wat<sub>i</sub> hebben er gisteren [<sub>NP</sub> t<sub>i</sub> voor (een) jongens] gevochten?  
 what have there yesterday for a boys fought  
 'What kind of boys fought yesterday?'  
 b. \*Wat<sub>i</sub> hebben [<sub>NP</sub> t<sub>i</sub> voor een jongens]<sub>j</sub> gisteren t<sub>j</sub> gevochten?

The contrast in (256) is not really surprising from the perspective of present-day generative grammar, given that there is a growing body of evidence in favor of the claim that the subject of an intransitive clause is not base-generated directly in the regular subject position, but in some more deeply embedded position. The fact that the nominative argument does not occupy the regular subject position in (256a) is also clear from the fact that it follows the adverbial phrase *gisteren*. If (256b) is indeed derived by moving the subject into the regular subject position of the clause, its unacceptability can be made to follow from the freezing principle.

Finally, note that it has been suggested that the *wat voor* split is only possible when the clause contains a verb in clause-final position, especially when a modal verb like *zouden* in (257a) is present. Although some difference in acceptability between the examples in (257) can perhaps be detected, we think it would be an overstatement to say that (257a) is perfectly well-formed and that (257c) is completely unacceptable: all examples seem acceptable.

- (257) a. Wat zouden er hier voor een mensen gewoond hebben?  
 what would there here for a people lived have  
 'What kind of people would have lived here?'  
 b. Wat hebben er hier voor een mensen gewoond?  
 what have there here for a people lived  
 c. Wat wonen er hier voor een mensen?  
 what live there here for a people

### D. Transitive verbs

What has been said in Subsection C regarding the subject of an intransitive verb also holds for the subject of a transitive clause. Although it has been claimed that the *wat voor* split is excluded for the subject of a transitive verb, this seems an overgeneralization. In (258a), an example is given that seems relatively good.

- (258) a. Wat<sub>i</sub> hebben er [<sub>NP</sub> t<sub>i</sub> voor een vogels] je voedertafel bezocht?  
 what have there for a birds your feeding table visited  
 'What kind of birds have visited your feeding table?'  
 b. <sup>?</sup>Wat<sub>i</sub> hebben [<sub>NP</sub> t<sub>i</sub> voor een vogels] je voedertafel bezocht?

Actually, (258b) is much better than might have been expected, as it seems to involve movement and hence should invoke a freezing effect. However, it may be the case that this example is ambiguous, because a definite direct object often makes it possible to drop the expletive *er*. This is shown in (259): example (259a) shows that in most varieties of Dutch the interrogative subject *wie* must be accompanied by the expletive. However, when a definite direct object is present, expletive *er* is preferably dropped; see Section 8.1.4 for more discussion.

- (259) a. Wie rookt <sup>%</sup>(er)?  
 who smokes there  
 b. Wie rookt (<sup>?</sup>er) de sigaar?  
 who smokes there the cigar

So, in order to determine whether (258b) is excluded by the freezing principle, we have to take the placement of adverbs into account: when the subject precedes the adverb, it occupies the regular subject position, and the *wat voor* split is predicted to be impossible; when it follows the adverb, it is probably in its base position, and the *wat voor* split is predicted to be possible. As is shown by (260), the subject may actually occupy either position, so we may indeed conclude that (258b) is ambiguous. The judgments on the two examples are more or less as predicted.

- (260) a. <sup>?</sup>Wat<sub>i</sub> hebben gisteren [<sub>NP</sub> t<sub>i</sub> voor een vogels] je voedertafel bezocht?  
 what have yesterday for a birds your feeding table visited  
 'What kid of birds visited your feeding table yesterday?'  
 b. \*Wat<sub>i</sub> hebben [<sub>NP</sub> t<sub>i</sub> voor een vogels]<sub>j</sub> gisteren t<sub>j</sub> je voedertafel bezocht?

### III. Indirect objects

The primed examples in (261) show that *wat voor* split of nominal indirect objects always leads to a degraded result; note that for some speakers, the primeless examples are also somewhat degraded (a prepositional indirect object seems preferred by most speakers).

- (261) a. <sup>(?)</sup>Wat voor een meisje heb je een lolly gegeven?  
 what for a girl have you a lollipop given  
 'To what kind of girl did you give a lollipop?'  
 a'. <sup>\*?</sup>Wat heb je voor een meisje een lolly gegeven?  
 b. <sup>(?)</sup>Wat voor een mensen heb je je artikel toegestuurd?  
 what kind of people have you your paper prt.-sent  
 'To what kind of people did you send your paper?'  
 b'. <sup>\*?</sup>Wat heb je voor een mensen je stuk toegestuurd?

*IV. Complements of a preposition*

As was shown earlier in (230), repeated here as (262), *wat voor* split of the complement of a preposition is excluded as well due to the fact that subextraction from a nominal complement of a preposition is generally excluded.

- (262) a. [PP Op [NP wat voor een bericht]] wacht je?  
           for     what for a message     wait you  
           ‘For what kind of message are you waiting?’  
       b. \*Wat<sub>i</sub> wacht je [PP op [NP t<sub>i</sub> voor een bericht]]?

It is interesting to note that the *wat voor* split differs in this respect from the exclamative *wat*-construction discussed in 1.2.2.1.4. The two (a)-examples in (263) suggest that this construction is similar to the *wat voor* construction: the fact illustrated in (263a) that *wat* and its associated noun phrase may precede the finite verb in clause-initial position suggests that the two form a constituent, and the availability of the split pattern in (263a') suggests that *wat* can be extracted from this constituent by *wh*-movement. However, this movement analysis of (263a') runs into problems with (263b): since subextraction from a nominal complement of a preposition is normally excluded, the movement analysis wrongly predicts this example to be ungrammatical.

- (263) a. Wat een hoop boeken heeft hij!  
           what a lot [of] books has he  
           ‘What a lot of books he has!’  
       a'. Wat heeft hij een hoop boeken!  
       b. Wat beschikt hij [PP over een hoop boeken]!  
           what has he P a lot [of] books  
           ‘What a lot of books he has at his disposal!’

*V. Nominal predicates*

*Wat voor* split of a nominal predicate is fully acceptable. This is illustrated in (264).

- (264) a. Wat voor een jongen is Jan eigenlijk?  
           what for a boy is Jan actually  
           ‘What kind of boy is Jan actually?’  
       b. Wat is Jan eigenlijk voor een jongen?

*4.2.2.3.2. The status of wat: parasitic gaps and intervention effects*

In the case of *wat voor* split, movement of *wat* does of course not involve movement of an argument but of a *part* of an argument, viz. the complete *wat voor* phrase. This has several consequences, which are discussed in this section. We start with discussion of so-called parasitic gaps in I, followed by the discussion of several intervention effects in II. Finally, we conclude in III by pointing out a semantic difference between split and unsplit a *wat voor* phrases.

*I. Parasitic gaps*

When *wat* is an argument in its own right, it may license a so-called °parasitic gap in the infinitival adverbial phrase [*zonder ... te lezen*] in (265a). The complement of

*lezen* need not be overtly expressed, but can be expressed by a phonetically empty parasitic gap PG, the content of which is identified by the moved *wh*-phrase (which is indicated by means of the subscript “i”). In other words, the interpretation of this example is something like “for which x, Jan threw x away without reading x”. As is shown in (265b), a parasitic gap can also be licensed when a *wat voor* phrase is moved into clause-initial position as a whole.

- (265) a. Wat<sub>i</sub> gooide Jan [zonder PG<sub>i</sub> te lezen] t<sub>i</sub> weg?  
 what threw Jan without to read away  
 ‘What did Jan throw away without reading?’  
 b. [Wat voor een boek]<sub>i</sub> gooide Jan [zonder PG<sub>i</sub> te lezen] t<sub>i</sub> weg?  
 what for a book threw Jan without to read away  
 ‘What kind of book did Jan throw away without reading?’

The N<sub>1</sub> *wat* from the *wat voor* phrase, on the other hand, cannot license such a parasitic gap: it can license neither a parasitic gap with the function of direct object of the infinitival verb *lezen* (cf. (266a)), nor a parasitic gap that functions as an N<sub>1</sub> in a *wat voor* phrase functioning as the direct object of *lezen* (cf. (266b)). It has been assumed that this is due to the fact that parasitic gaps can be licensed by arguments only.

- (266) a. \*Wat<sub>i</sub> gooide Jan [zonder PG<sub>i</sub> te lezen] [t<sub>i</sub> voor een boeken] weg?  
 what threw Jan without to read for a books away  
 b. \*Wat<sub>i</sub> gooide Jan [zonder [PG<sub>i</sub> (voor een tijdschriften)] te lezen]  
 what threw Jan without for a magazines to read  
 [t<sub>i</sub> voor een boeken] weg?  
 for a books away

For completeness’ sake, note that, according to some speakers, example (267b) is acceptable as well. If this is really the case, this example is a problem for the earlier claim that scrambling induces a freezing effect. Since it is generally assumed that Dutch parasitic gaps must be licensed by a *wh*-moved or a scrambled phrase (cf. Bennis & Hoekstra 1984), it would follow that the *wat voor* phrase in (267b) has been scrambled, and, consequently, a freezing effect is wrongly predicted to arise.

- (267) a. [Wat voor een boek]<sub>i</sub> gooide Jan [zonder PG<sub>i</sub> te lezen] t<sub>i</sub> weg?  
 what for a book threw Jan without to read away  
 ‘What kind of book did Jan throw away without reading?’  
 b. <sup>%</sup>Wat<sub>i</sub> gooide Jan [t<sub>i</sub> voor een boek]<sub>j</sub> [zonder PG<sub>j</sub> te lezen] t<sub>j</sub> weg?

In this connection it should also be mentioned that Beermann (1997) claims that, in German, one occurrence of *wat* may bind the gaps in two or more *wat voor* phrases. Example (268) shows that this is not possible in Dutch. In fact, the examples in (268b&c) show that *wat voor* split is degraded anyway in these examples; the only fully acceptable option is to move the full subject into clause-initial position.



- (268) a. \*Wat<sub>i</sub> hebben (er) [ t<sub>i</sub> voor een meisjes] [ t<sub>i</sub> voor een jongens] gekust?  
           what have     there     for a girls                     for a boys             kissed  
           Intended meaning: ‘What kind of girls kissed what kind of boys?’  
       b. \*?Wat<sub>i</sub> hebben (er) [ t<sub>i</sub> voor een meisjes] [ wat voor een jongens] gekust?  
       c. \*Wat<sub>i</sub> hebben (er) [ wat voor een meisjes] [ t<sub>i</sub> voor een jongens] gekust?  
       d. [Wat voor een meisjes]<sub>i</sub> hebben t<sub>i</sub> [ wat voor een jongens] gekust?

## II. Intervention effects

The discussion in the previous subsection has shown that the interrogative element *wat* does not function as an argument; it is only the full *wat voor* that acts like that. This subsection will show that this conclusion is supported by the so-called intervention effect. Arguments and non-arguments differ in that the latter are more sensitive to certain intervention effects than the former. As is shown in (269), for example, an interrogative direct object can be moved across the negative adverb *niet*, whereas an interrogative adverbial phrase of manner cannot. Below, we will see that N<sub>1</sub> *wat* behaves like a non-argument in the sense that it cannot cross certain adverbs, as a result of which the *wat voor* split is sensitive to the presence of these adverbs.

- (269) a. Welke auto heb jij niet gerepareerd?  
           which car have you not repaired  
           ‘Which car didn’t you repair?’  
       b. \*Hoe heb jij die auto niet gerepareerd?  
           how have you that car not repaired  
           \*‘How didn’t you repair that car?’

The examples in (270) show that time and place adverbs like *gisteren* ‘yesterday’ and *daar* ‘there’ do not have any effect on the *wat voor* split. The split is possible as long as the remnant follows the adverb.

- (270) a. Wat voor een boeken heeft hij gisteren/daar gelezen?  
           what for a books has he yesterday/there read  
           ‘What kind of books did he read yesterday/there?’  
       b. Wat heeft hij gisteren/daar voor een boeken gelezen?  
       c. \*?Wat heeft hij voor een boeken gisteren/daar gelezen?

The situation is different, however, with manner adverb like *zorgvuldig* ‘carefully’, modal adverbs like *zeker* ‘certainly’, frequency adverbs like *vaak* ‘often’, or the negative adverb *niet* ‘not’; the (a)- and (b)-examples in (271) to (273) show that these adverbial phrases allow movement of the complete *wat voor*, but block the *wat voor* split. Perhaps the (b)-examples become slightly better when the *wat voor* remnant precedes the adverbial phrase, as in the (c)-examples, but they still seem to be severely degraded; note that if one were to consider these examples grammatical, a similar problem would arise for the freezing principle, as has been pointed out for (267b).

- (271) a. Wat voor een boeken heeft hij zorgvuldig gelezen?  
 what for a books has he carefully read  
 'What kind of books did he read carefully?'  
 b. \*Wat heeft hij zorgvuldig voor een boeken gelezen?  
 c. <sup>??</sup>Wat heeft hij voor een boeken zorgvuldig gelezen?
- (272) a. Wat voor een boeken heeft hij zeker/vaak gelezen?  
 what for a books has he certainly/often read  
 'What kind of books did he certainly/often read?'  
 b. \*Wat heeft hij zeker/vaak voor een boeken gelezen?  
 c. <sup>??</sup>Wat heeft hij voor een boeken zeker/vaak gelezen?
- (273) a. Wat voor een boeken heeft hij niet gelezen?  
 what for a books has he not read  
 'What kind of books didn't he read?'  
 b. \*Wat heeft hij niet voor een boeken gelezen?  
 c. <sup>??</sup>Wat heeft hij voor een boeken niet gelezen?

The examples in (274) show that in the context of long *wh*-extraction, *wat voor* split can also be blocked by negation in the matrix clause. The (a)-examples first show that long *wh*-movement is possible both with the unsplit and the split pattern. The (b)-examples show that, although long *wh*-movement of a *wat voor* phrase across negation is somewhat marked anyway, long *wh*-movement of *wat* in isolation gives rise to a severely degraded result. This suggests again that N<sub>1</sub> *wat* resembles adverbial phrases, which cannot be extracted from embedded clauses either when the matrix clause contains negation.

- (274) a. Wat voor een boeken<sub>i</sub> dacht Jan [dat hij <sub>t<sub>i</sub></sub> moest lezen]?  
 what for a books thought Jan that he had.to read  
 'What kind of books did Jan think that he had to read?'  
 a'. <sup>(?)</sup>Wat<sub>i</sub> dacht Jan [dat hij [ <sub>t<sub>i</sub></sub> voor een boeken] moest lezen]?  
 what thought Jan that he for a books had.to read  
 b. <sup>?</sup>Wat voor een boeken<sub>i</sub> wist Jan niet [dat hij <sub>t<sub>i</sub></sub> moest lezen]?  
 what for a books knew Jan not that he had.to read  
 'What kind of books didn't Jan know that he had to read?'  
 b'. \*Wat<sub>i</sub> wist Jan niet [dat hij [ <sub>t<sub>i</sub></sub> voor boeken] moest lezen]?  
 what knew Jan not that he for books had.to read

### III. The *wat voor* split and universally and existentially quantified expressions

*Wat voor* split may give rise to meaning differences when the sentence contains a universal quantifier like *iedereen* 'everybody'. Consider the examples in (275). Although judgments are apparently not as sharp for all speakers, it seems that the preferred answer to (275a) involves the characterization of one type of book, for instance, a textbook on linguistics: it is a textbook on linguistics that everybody has read. The preferred answer to (275b), on the other hand, involves a so-called pair-list reading: Jan read a textbook on linguistics, Peter a novel, and Marie a study on biochemistry. This difference in meaning is sometimes expressed by assuming that the °scope of the universal operator with respect to the question operator differs in

the two examples: in (275a), the question operator has wide scope, whereas in (275b) it has narrow scope.

- (275) a. Wat voor een boek heeft iedereen gelezen?  
 what for a book has everyone read  
 'What kind of book did everyone read?'  
 b. Wat heeft iedereen voor een boek gelezen?

The difference between the two examples can be highlighted by modifying the universal quantifier *iedereen* by the adverb *vrijwel* 'nearly', as in (276). This modifier blocks the pair-list reading (due to the fact that it leaves unspecified which entities must be excluded from the answer list), and as we can see in (276b) the *wat voor* split now leads to a severely degraded result. Provided that this is due to semantic anomaly, this clearly shows that only the pair-list reading is available for constructions like (275b) and (276b). It may be the case, however, that (275a) is truly ambiguous and also allows the pair-list reading, but there do not seem to be any syntactic arguments to justify such a view.

- (276) a. Wat voor een boek heeft vrijwel iedereen gelezen?  
 what for a book has nearly everyone read  
 'What kind of book did nearly everyone read?'  
 b. \*?Wat heeft vrijwel iedereen voor een boek gelezen?

The examples in (277) show that the presence of an indefinite argument with an existential interpretation may also severely hinder the realization of a *wat voor* phrase, either split or unsplit. When the indefinite noun phrase is generic, on the other hand, the result is fully acceptable, as shown in (278).

- (277) a. Wat voor een jurk heeft die/\*een vrouw gisteren gedragen?  
 what for a dress has that/a woman yesterday worn  
 'What kind of dress did that/a woman wear yesterday?'  
 a'. Wat heeft die/\*een vrouw gisteren voor een jurk gedragen?  
 b. Wat voor een lolly heeft Jan dat/\*een kind gegeven?  
 what for a lollipop has Jan that/a child given  
 'What kind of lollipop did Jan give to that/a child?'  
 b'. Wat heeft Jan dat/\*een kind voor een lolly gegeven?  
 (278) a. Wat voor een kleding draagt een hoogleraar bij zo'n gelegenheid?  
 what for a clothes wears a professor at such an occasion  
 'What kind of clothes does a professor wear at such an occasion?'  
 b. Wat draagt een hoogleraar voor een kleding bij zo'n gelegenheid?

Note that the contrast between the examples in (277) and in (278) holds not only for *wat voor* phrases; when we replace the *wat voor* phrase in (277a) by, e.g., the *wh*-phrase *welke jurk* 'which dress' the result is still unacceptable. The unacceptability of the nonspecific indefinite subject DPs in *wh*-questions is due to the fact that it simply does not provide the hearer with sufficient information to answer the question adequately; in order to properly answer a question like (277a), the hearer

must at least be able to establish the identity of the woman involved in the relevant event of wearing a dress.

### 4.3. Bibliographical notes

Probably the most exhaustive discussion of Dutch binominal, partitive and pseudo-partitive constructions, discussed in Section 4.1, can be found in Vos (1999). More discussion of the quantificational binominal construction can be found in Paardekooper (1952), Putter (1976), Bennis (1978), Van Gestel (1986), and Barbiers (1990). For a discussion of similar constructions in other languages, see Löbel (1986/1989), Bhatt (1990), Delsing (1991), and Alexiadou et al. (2007: Part III, ch.2). More discussion on the partitive and pseudo-partitive constructions can be found in Hoeksema (1984b/1996), Coppen (1991), De Jong (1991) and De Hoop (2003). It is important to repeat here that the notion *pseudo-partitive construction* as used in this chapter differs from the one used in the literature, where it is often used to refer to what we have called quantificational binominal constructions, that is, constructions like *een kop koffie* 'a cup of coffee'.

The discussion of the *N van een N* construction in Section 4.2 is mainly based on Paardekooper (1956), Everaert (1992), and, especially, Den Dikken (1995b) and Bennis et al. (1998). The last two articles are also a major source for the discussion of the *wat voor* construction in Section 4.2.2. Other important studies on this construction are: Bennis (1983/1995), Den Besten (1985), Corver (1990/1991), De Hoop & Kosmeijer (1991), Broekhuis (1992), Aarts (1994), Beermann (1997), Honcoop (1998), and Alexiadou et al. (2007: Part III, ch.2).



# Chapter 5

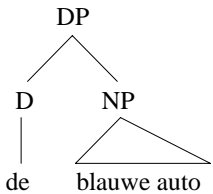
## Determiners: articles and pronouns

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## Introduction

This chapter will discuss the semantic and syntactic behavior of the determiners. In the current generative framework, it is generally taken for granted that a determiner defines its own endocentric °projection in the structure of the noun phrase; cf. Abney (1987). It is taken to be the head of a so-called DETERMINER PHRASE (DP), which is located on top of the projection of the head noun, NP. Schematically, example (1a) can be represented in labeled bracketing as in (1b), or as the tree diagram in (1c). Recall that we use the notion of “noun phrase” in a neutral way, whereas the notions DP and NP are used to refer to the substructures marked as such in (1b&c).

- (1) a. de blauwe auto  
the blue car  
b. [<sub>DP</sub> [<sub>D</sub> de] [<sub>NP</sub> blauwe auto]]  
c.
- 
- ```

graph TD
    DP --> D
    DP --> NP
    D --> de
    NP --> blauwe
    NP --> auto
  
```

The DP structure of noun phrases formally recognizes the fact that it is the determiner which is the syntactic head, and as such determines the referential/quantificational properties and the syntactic distribution of the noun phrase as a whole (apart, of course, from the semantic selection restrictions imposed by, e.g., the verb on the denotation of the head noun of its °complement).

There are two main types of determiners: articles and pronouns, which will be discussed in 5.1 and 5.2, respectively. Of course, noun phrases can also be introduced by a cardinal numeral or a quantifier like *sommige* ‘some’; these will not be discussed in this chapter, but in Chapter 6. Under the generally accepted assumption that a phrase has exactly one head, the claim that demonstrative and possessive pronouns are determiners, and hence occupy the D position of the DP, can be motivated by the fact that they are in complementary distribution with the articles, as well as with each other. It is impossible to simultaneously have, for instance, an article and a demonstrative pronoun in one DP. This is illustrated in (2) for combinations of two types of non-interrogative determiners; obviously, examples containing all three types of determiners are excluded as well.

- (2) a. \*het dit boek [article and demonstrative pronoun]  
a'. \*dit het boek  
b. \*het mijn boek [article and possessive pronoun]  
b'. \*mijn het boek  
c. \*dat mijn boek [possessive and demonstrative pronoun]  
c'. \*mijn dat boek

Note in passing, however, that the claim that articles and pronouns are both determiners is weakened by the fact that this does not seem to be universally valid:



some languages, like Italian or Greek, do not exhibit the complementary distribution of the Dutch articles and possessive/demonstrative pronouns; cf., e.g., Alexiadou et al. (2007: 93).

Personal pronouns are also included in this chapter because there are various reasons to consider them determiners as well. From a semantic point of view they resemble the determiners in having primarily a referring function: their descriptive content is limited and certainly does not exceed that of the possessive pronouns. Furthermore, when it is assumed that personal pronouns are within the NP-domain, it cannot readily be accounted for that they cannot be preceded by an article or a demonstrative/possessive pronoun, whereas this follows immediately when they occupy the D-position; see, e.g., Longobardi (1994) and Alexiadou et al. (2007: 211/9) for more empirical support from Italian and Serbo-Croatian in favor of the claim that personal pronouns are determiners.

Before we begin discussing the articles in 5.1, we want to make some general comments on the structure of the noun phrase in (1). The NP in this structure can be said to determine the denotation of the noun phrase: it acts like a predicate, and can therefore be represented as a set of entities which have in common that they satisfy the description provided by the NP; the NP *blauwe auto* 'blue car' denotes the set of entities that have the properties of being a car and being blue; cf. Section A1.3. Determiners, on the other hand, are normally used to determine the reference of the noun phrase. A definite determiner like *de* in *de blauwe auto* 'the blue car', for example, expresses that the denotation set of the NP *blauwe auto* 'blue car' contains exactly one entity and that it is this entity that the speaker refers to. The fact that a definite determiner has this meaning leads us to the relation between language and reality.

The relation between language and reality has given rise to ardent debates, and we will certainly not try to resolve here all the issues that have been brought up. We want to point out, however, that many of the problems that have been discussed in these debates find their origin in the assumption that language is directly related to reality. Consider example (3). Given the generally accepted idea that a singular noun phrase containing a definite determiner like *de* refers to a unique entity, this example is problematic because the noun phrase *de Nederlandse president* 'the Dutch president' does not refer to an entity in the real world, which means that at first sight this example cannot be assigned a truth value.

- (3)        *De Nederlandse president is een begaafde man.*  
              the Dutch president                is a gifted man

Another problem is that it seems beyond the powers of the language user to determine what reality actually is; if we want to make objective statements about reality, we have to go beyond our personal experience and enter the domain of science. The language user therefore does not refer to reality directly, but to his internalized CONCEPTION of reality, which is invoked in his speech acts. For example, a sentence like (3) can be seriously uttered by anyone who has the erroneous belief that the Dutch prime minister is the president of the Netherlands, and, consequently, the speaker will also assign a truth value to this sentence. In other words, by assuming that a noun phrase does not refer to entities in the material

world but to entities in the speaker's internalized conceptualization of the material world, the reference problem in (3) dissolves.

Next, the question arises of what a language user is actually doing when he or she utters an example like (3). The definite article *de* expresses that in the speaker's conception of reality there is a unique entity that has the property of being the Dutch president, and it is this entity that the property of being a gifted man is predicated of. Of course, this conception of reality may clash with the conception of reality held by the listener, who is then likely to correct the speaker by saying that the person in question is not the president but the prime minister. What this shows is that language users do not invoke knowledge of reality (which they may be assumed to lack), but knowledge of their internalized conceptualization of reality. Although the conceptualizations of reality may differ among individuals, there is generally sufficient overlap to make communication more or less successful: in fact, one might even argue that the goal of communication is to eliminate discrepancies between the conceptualizations of reality held by the participants in the discourse, by correcting or updating the knowledge encoded by these; cf. Verhagen (2005).

Often, the participants do not even exploit their full conceptualization of reality in discourse. This can be easily demonstrated by means of the noun phrase *de blauwe auto* 'the blue car'. As we have claimed above, this noun phrase expresses that the set denoted by the NP *blauwe auto* 'blue car' contains exactly one member. Since we can safely assume that every language user is aware of the fact that the set denoted by *blauwe auto* contains an extremely large number of entities, this knowledge is clearly not relevant. The participants in the discourse rather have a tacit agreement on the question what entities are relevant for the discussion in question; this limited set of entities under discussion is often referred to as the DOMAIN OF DISCOURSE or DOMAIN D, which may be assumed to consist of the shared knowledge of the participants on the topic under discussion. And *de blauwe auto* expresses that, in this limited domain, the set of cars contains just a single member.

To summarize, we have claimed that there is no direct relation between language and reality. Instead, the two areas are only indirectly related by means of the language user's internalized conception of the "real world", and the assignment of truth-values is only based on the (correct or incorrect) knowledge encoded in this conception. In conversation, the assignment of truth-values is further restricted by domain D, the shared knowledge of the participants on the topic of discussion. This view on the relation between language and reality will be adopted in the discussion below.

### 5.1. Articles

Table 1 shows that Dutch has three overt articles: two definite ones, *de* and *het*, and one indefinite one, *een*. The definite articles are sensitive to gender and number distinctions: *de* is used with singular non-neuter and plural nouns, whereas the definite article *het* occurs with singular neuter nouns. These two definite articles can also be used with non-count nouns. The indefinite article *een* is sensitive to number only; it normally only occurs with singular count nouns. It has therefore been suggested that it has a phonetically empty plural/non-count counterpart, represented by "Ø" in the table. That we are dealing with a null form is further supported by the

fact that both *een* and  $\emptyset$  have a negative counterpart, which is *geen* ‘no’ in both cases.

Table 1: Articles

|            |            | COUNT NOUNS                   |                                     | NON-COUNT NOUNS                 |
|------------|------------|-------------------------------|-------------------------------------|---------------------------------|
|            |            | SINGULAR                      | PLURAL                              |                                 |
| DEFINITE   | NON-NEUTER | <i>de vrouw</i><br>the woman  | <i>de vrouwen</i><br>the women      | <i>de wijn</i><br>the wine      |
|            | NEUTER     | <i>het meisje</i><br>the girl | <i>de meisjes</i><br>the girls      | <i>het bier</i><br>the beer     |
| INDEFINITE | NON-NEUTER | <i>een vrouw</i><br>a woman   | $\emptyset$ <i>vrouwen</i><br>women | $\emptyset$ <i>wijn</i><br>wine |
|            | NEUTER     | <i>een meisje</i><br>a girl   | $\emptyset$ <i>meisjes</i><br>girls | $\emptyset$ <i>bier</i><br>beer |
| NEGATIVE   | NON-NEUTER | <i>geen vrouw</i><br>no woman | <i>geen vrouwen</i><br>no women     | <i>geen wijn</i><br>no wine     |
|            | NEUTER     | <i>geen meisje</i><br>no girl | <i>geen meisjes</i><br>no girls     | <i>geen bier</i><br>no beer     |

The definite and indefinite articles (*de/het/een*) are normally pronounced with a schwa (/ə/). Moreover, the initial consonant of the definite neuter article *het* is normally not pronounced. The weak (phonological reduced) form of *het* can be expressed orthographically by the apostrophe notation (cf. 't), which is also available for the indefinite article *een* (cf. 'n). In careful speech (“officialese” and the like) or when the article is stressed, the neuter definite article can be pronounced as [het]; the indefinite article *een* can be pronounced with a full vowel [e:], and is then homophonous to the numeral *één* ‘one’.

- (4)
- Colloquial speech

• Careful speech
- a. de: [də]

b'. het/'t: [ət]

c. een/'n: [ən]

d. geen: [ye:n]

b'. het: [het]

c'. een: [e:n]

Unlike the German articles, the Dutch articles do not decline; apart from some historical relics, their form is invariant in all syntactic environments. This is shown for the definite non-neuter article *de* in the primeless examples in (5), but the same thing holds for the other articles. The primed examples give the German translations of the Dutch examples for comparison.

- (5)
- a. *De* man is ziek.

a'. *Der*<sub>nom</sub> Mann ist krank.

b. Ik heb *de* man gisteren ontmoet.

b'. Ich habe *den*<sub>acc</sub> Mann gestern begegnet.
- the man is ill

I have the man yesterday met

- c. Ik heb *de* man het boek aangeboden.  
 c'. Ich habe *dem*<sub>dat</sub> Mann das Buch angeboten.  
 I have the man the book prt.-offered

According to the DP structure of noun phrases, the article is the syntactic head of the noun phrase, and as such is responsible for several semantic (and syntactic) properties of the noun phrase as a whole. These semantic properties of definite and indefinite articles are discussed in Section 5.1.1. Section 5.1.2 discusses noun phrases that normally do not contain an article, such as noun phrases consisting of a proper noun; in this section, special emphasis will be put on those cases that exceptionally do license an article. Section 5.1.3 continues with a brief discussion of definite articles with acronyms and abbreviations, and Section 5.1.4 discusses articles exhibiting deviant semantics. This section concludes in 5.1.5 with a section entirely devoted to the negative article *geen*: this is motivated by the fact that *geen* exhibits several properties that set it apart from the other articles.

### 5.1.1. Noun phrases headed by an article

This section discusses and illustrates the semantic properties of the definite and indefinite articles. We will start by defining the core meaning of the articles, after which we will discuss the interpretations these articles trigger on the complete noun phrase in general terms: consecutively, we will discuss the notions of definiteness, specificity, distributivity and genericity. The notions of definiteness and specificity will also play an important role in Chapter 6, where the meaning of the definite and indefinite articles are compared to the meaning of numerals and quantifiers.

#### 5.1.1.1. The core meaning of the articles

The easiest way to explain the core meaning of the articles is by using Figure 1 from Section 1.1.2.2.1, repeated below, which can be used to represent the subject-predicate relation in a clause. In this figure, A represents the denotation set of the subject NP and B the set denoted by the verb phrase. The intersection  $A \cap B$  denotes the set of entities for which the proposition expressed by the clause is claimed to be true. In an example like *Jan wandelt op straat*, for example, it is claimed that the set denoted by A, viz. {Jan}, is properly included in set B, which is constituted by people walking in the street. In other words, it expresses that  $A - (A \cap B) = \emptyset$ .

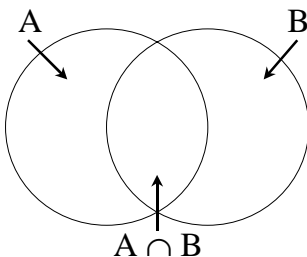


Figure 1: Set-theoretic representation of the subject-predicate relation

The core function of the determiners is to specify the intersection  $(A \cap B)$  and the remainder of set  $A$ , that is,  $A - (A \cap B)$ . The definite article *de/het* ‘the’ in (6) expresses that in the domain of discourse (domain  $D$ ), all entities that satisfy the description of the NP are included in the intersection  $A \cap B$ , that is, that  $A - (A \cap B) = \emptyset$ . The singular noun phrase *de jongen* ‘the boy’ in (6a) has therefore approximately the same interpretation as the proper noun *Jan* in the discussion above; it expresses that the cardinality of  $A \cap B$  is 1 (for which we will use the notation:  $|A \cap B| = 1$ ). The only difference between the singular and the plural example in (6) is that the latter expresses that  $|A \cap B| \geq 1$ .

- (6) a. *De jongen loopt op straat.*  
           the boy     walks   in the.street  
       a'. *de/het N<sub>sg</sub>: |A ∩ B| = 1 & A - (A ∩ B) = ∅*  
       b. *De jongens lopen op straat.*  
           the boys     walk   in the.street  
       b'. *de N<sub>pl</sub>: |A ∩ B| ≥ 1 & A - (A ∩ B) = ∅*

The semantic contribution of the indefinite articles in (7a&b) is to indicate that  $A \cap B$  is not empty; they do not imply anything about the set  $A - (A \cap B)$ , which may or may not be empty. The difference between the singular indefinite article *een* and the (phonetically empty) plural indefinite article  $\emptyset$  is that the former expresses that  $|A \cap B| = 1$ , whereas the latter expresses that  $|A \cap B| \geq 1$ .

- (7) a. *Er loopt een jongen op straat.*  
           there walks a boy           in the.street  
           ‘There is a boy walking in the street.’  
       a'. *een N<sub>sg</sub>: |A ∩ B| = 1 & |A - (A ∩ B)| ≥ 0*  
       b. *Er lopen ∅ jongens op straat.*  
           there walk     boys     in the.street  
           ‘There are boys walking in the street.’  
       b'. *∅ N<sub>pl</sub>: |A ∩ B| ≥ 1 & |A - (A ∩ B)| ≥ 0*

It is important to note that only parts of the meaning descriptions in the primed examples of (6) and (7) are inherently linked to the determiner: definite articles imply that  $A - (A \cap B) = \emptyset$ , whereas indefinite articles do not. The claims with respect to the cardinality of the intersection  $A \cap B$  do *not* come from the articles but from the number (singular versus plural) marking on the nouns: singular marking expresses that  $|A \cap B| = 1$ , whereas plural marking expresses that  $|A \cap B| \geq 1$ . It is therefore not surprising that the difference between definite and indefinite noun phrases headed by a non-count like *wijn* ‘wine’ is that the former refers to a contextually determined amount of wine, whereas the latter simply refers to an indeterminate amount of wine.

The meaning that we attribute to the number marking, which is due to Farkas & De Swart (2008), may come as a surprise. First, the meaning attributed in (7a) to the singular indefinite noun phrase breaks with the tradition in formal semantics that translates the indefinite article by means of the existential  $\exists x$ , which implies that the article expresses that the intersection  $A \cap B$  contains *at least* one

member, that is,  $|A \cap B| \geq 1$ . Second, (7b) attributes this meaning instead to the plural marking, which seems to conflict with the fact that plural nouns are normally interpreted as expressing that the intersection  $A \cap B$  contains more than one member, that is,  $|A \cap B| > 1$ . Below, we will therefore motivate why we adopt the proposal by Farkas & De Swart (who actually assume that the plural marking is ambiguous and can express either  $|A \cap B| \geq 1$  or  $|A \cap B| > 1$ , but we will ignore this here).

The traditional assumption that indefinite singular noun phrases express that  $|A \cap B| \geq 1$  predicts that a speaker would use an indefinite singular noun phrase when he has no clue about the cardinality of a certain set. The proposal here, according to which the plural marking on the noun expresses that  $|A \cap B| \geq 1$ , on the other hand, predicts that the speaker would use an indefinite plural noun phrase in that case. That the latter prediction is correct becomes clear when we consider the questions in (8): when a speaker is interested whether the addressee is a parent, that is, whether the addressee has one or more children, the typical way to ask the question would be as given in (8a), not as in (8b).

- (8) a. Heb je kinderen?  
have you children  
'Do you have children?'  
b. #Heb je een kind?  
have you a child  
'Do you have a child?'

Example (8b) is, of course, not ungrammatical but can only be used when the speaker presupposes that the cardinality of the referent set will not be larger than one: so one could ask a question like *Heb je al een kind?* 'Do you already have a child?' when the presupposition is that under normal circumstances the addressee would be childless. For the same reason, examples like (9a) require that the singular be used, given that this expresses that the speaker is aware of the fact that people normally have just one nose; using the plural would violate Grice's (1975) maxim of quantity as this would wrongly suggest that the speaker lacks this knowledge. Similarly, by opting for one of the options in (9b) may make more explicit what the speaker actually desires, a single cigarette or, e.g., a packet of cigarettes.

- (9) a. Heb jij een mooie neus/#mooie neuzen?  
have you a beautiful nose/beautiful noses  
'Do you have a beautiful nose/beautiful noses?'  
b. Heb je een sigaret/sigaretten voor me?  
have you a cigarette/cigarettes for me  
'Do you have a cigarette/cigarettes for me?'

Another context that licenses the use of a plural indefinite noun phrase involves clauses containing the modal *willen* 'to want'. Consider the two examples in (10): example (10a) is similar to (8a) in that it inquires whether the addressee is planning to have one or more cats as a pet; example (10a) would be infelicitous in this use and instead suggests that the speaker has a certain cat in mind that is on offer.

- (10) a. Wil je katten?  
           want you cats  
           'Do you want cats?'  
       b. #Wil je een kat?  
           want you a cat  
           'Do you want a cat?'

A third case in which the speaker may use a plural indefinite noun phrase to express that he has no presupposition about the cardinality is in the case of inferences. When the speaker is visiting some people that he does not know intimately and enters a room littered with toys, he could utter something like (11a) without excluding the possibility that his hosts have only one child. For at least some speakers, using example (11b) is less felicitous in this context as it may suggest that the speaker has reason to believe that the cardinality of the set of children is one.

- (11) a. Er wonen hier kinderen.  
           there live here children  
           'There are children living here.'  
       b. #Er woont hier een kind.  
           there lives here a child  
           'There is a child living here.'

That the singular number marking in definite noun phrases like (6a) implies that the intersection has the cardinality 1 seems uncontroversial, which means that Farkas & De Swart's proposal makes it possible to assign a single meaning to the singular:  $|A \cap B| = 1$ . That the plural marking in definite phrases like (6b) can express  $|A \cap B| \geq 1$  is harder to establish. This is due to the fact discussed in Section 5.1.1.2 below that the definite article generally presupposes that the speaker and the addressee are able to identify the referents in the referent set of the noun phrase. In the majority of cases the speaker will therefore know whether the cardinality of the referent set is one or more than one. If the former is the case, using a singular definite noun phrase will be more informative than using a plural definite noun phrase; the former will therefore be preferred by Grice's maxim of quantity.

Nevertheless, there are certain contexts that show that plural definite noun phrases do not make any implication concerning the cardinality of the referent set. Picture some employee of a company responsible for dealing with customers' complaints. When he comes into the office in the morning, he begins by having a look at the newly arrived complaints, at least, if there are any. One morning, there is no post on his desk; he picks up the phone and asks the person who normally sorts and distributes the post the question in (12a), which sort of presupposes that there will be some new complaints but does not imply anything about the number of those complaints. In this respect, (12a) is crucially different from (12b), which implies that the referent set has the cardinality 1.

- (12) a. Kan je me de nieuwe klachten brengen?  
 can you me the new complaints bring  
 'Can you bring me the new complaints?'  
 b. Kan je me de nieuwe klacht brengen?  
 can you me the new complaints bring  
 'Can you bring me the new complaint?'

The same can be observed in conditionals. Example (13a) is taken from a text on family law concerning divorce. Using the singular noun, as in (13b), would be distinctly odd in this context since this would imply that in all cases of a divorce there is only a single child involved; such implications are completely absent in examples like (13a). The examples in (12) and (13) again support the proposal by Farkas & De Swart, which assigns a single meaning to the plural:  $|A \cap B| \geq 1$ .

- (13) a. Als de kinderen aan één van de ouders zijn toegewezen, dan ...  
 if the children to one of the parents are prt.-awarded then  
 'If one of the parents is awarded the custody of the children ...'  
 b. <sup>#</sup>Als het kind aan één van de ouders is toegewezen, dan ...  
 if the child to one of the parents is prt.-awarded then

The semantic function of the negative article *geen* 'no' is to indicate that the intersection of A and B is empty:  $A \cap B = \emptyset$ . No claims are made about set A or set B: it may or may not be the case that domain D contains a set of boys and/or that there is a set of people who are walking in the street.

- (14) a. Er loopt geen jongen op straat.  
 there walks no boy in the.street  
 a'. geen  $N_{sg}$ :  $A \cap B = \emptyset$  &  $|A - (A \cap B)| \geq 0$   
 b. Er lopen geen jongens op straat.  
 there walk no boys in the.street  
 b'. geen  $N_{pl}$ :  $A \cap B = \emptyset$  &  $|A - (A \cap B)| \geq 0$

The distinction between singular and plural is again not related to the meaning of the article: examples like (14a&b) can be used to deny a presupposition that, respectively,  $|A \cap B| = 1$  or  $|A \cap B| \geq 1$ . When no such presupposition is present, the plural is used. Consider the situation in which Jan is in hospital with a fractured leg. He's bored stiff and therefore his friend Peter always brings him something to read when he is visiting: the number of books varies depending on their size. One day Peter enters the hospital ward empty-handed. In this case Jan will probably ask the question in (15a) and not the one in (15b), given that the latter presupposes that Peter normally brings just one book.

- (15) a. Heb je geen boeken voor me meegenomen?  
 did you no books for me prt.-taken  
 'Didn't you bring me any books?'  
 b. <sup>#</sup>Heb je geen boek voor me meegenomen?  
 did you no book for me prt.-taken



The meaning contributions of the three articles can be summarized by means of the table in example (16). There are no implications concerning the cardinality of the intersection  $A \cap B$  given that it is the role of the number marking of the noun to specify this: the singular marking expresses that  $|A \cap B| = 1$  and the plural marking that  $|A \cap B| \geq 1$ .

(16) The core meaning of the articles

|                                 | $A \cap B$ | $A - (A \cap B)$ |
|---------------------------------|------------|------------------|
| DEFINITE ARTICLE <i>de/het</i>  | non-empty  | empty            |
| INDEFINITE ARTICLE <i>een/Ø</i> | non-empty  | indeterminate    |
| NEGATIVE ARTICLE <i>geen</i>    | empty      | indeterminate    |

In the following sections we will see, however, that more can be said about the precise characterization of the meaning of the articles, and it will also become clear that some uses of the articles do not fall under the general characterization of the meaning of the articles given in this section.

5.1.1.2. *Definiteness and indefiniteness*

This section discusses one of the semantic core distinctions between noun phrases, namely, the distinction between definite and indefinite noun phrases. We start in Subsections I and II by showing that definite noun phrases are typically used to refer to some entity in domain D, whereas indefinite noun phrases are typically used to introduce some new entity into domain D. This does not mean, however, that the introduction of a new entity into domain D always requires the use of an indefinite noun phrase; in Subsection III, we will discuss several cases in which this can also be done by means of a definite noun phrase.

I. *Definite noun phrases*

As their name suggests, the definite articles *de* and *het* serve to pick out a definite referent from the set denoted by their NP-complement; cf. the discussion of (1). This definite referent may be a specific entity or a group of entities in domain D. The former is the case when the nominal predicate is singular, as in (17).

- (17) a. De kat is ziek.  
          the cat is ill  
      b. Het boek is           gisteren    verzonden.  
          the book has.been yesterday sent  
          ‘The book was sent yesterday.’

The noun phrase in example (17a) presupposes that domain D contains a single entity that satisfies the description provided by the NP *kat*, and it is predicated of this entity that it is ill. Because domain D consists of the shared knowledge of the speaker and listener, it is also typically assumed that the latter is able to uniquely identify this entity. The sentence in (17a) would be infelicitous when domain D contains two entities that satisfy the description of the NP; in that case, the description would be made more specific (e.g., *de kater* ‘the tomcat’) in order to satisfy the requirement that a singular definite noun phrase refers to a unique entity.

Similarly, the noun phrase in (17b) presupposes that there is only a single book that is part of domain D, and it is predicated of this book that it was sent yesterday.

When the noun phrase is plural, it does not refer to a single entity but to a set. Again, it is presupposed that the listener is able to uniquely identify this set. When the speaker utters a sentence like (18a), he presupposes that the listener knows that he is referring to, for instance, his own two cats and the three cats of his friend Mary. Something similar holds for (18b).

- (18) a. De katten zijn ziek.  
           the cats are ill  
       b. De boeken zijn gisteren verzonden.  
           the books have been yesterday sent

The discussion above amounts to saying that the use of a definite article implies that set A in Figure 1 does not include all entities that satisfy the description of the NP, but only those entities that are part of domain D: the referent of the noun phrase is assumed to be identifiable for both the speaker and the addressee. In this sense definite noun phrases are typically linked to the discourse ( $^{\circ}$ D-linked). The same thing holds for definite noun phrases headed by a non-count noun as in *De wijn staat in de keuken* 'The wine is in the kitchen'; cf. the discussion below (7).

## II. Indefinite noun phrases

The indefinite articles *een* 'a' and  $\emptyset$  lack the implication usually found with definite articles that the entities in set A are part of domain D, and hence known to both the speaker and the user. On the contrary, indefinite noun phrases are often used to introduce a new entity into domain D in so-called PRESENTATIVE clauses (clauses that introduce a new entity into domain D). Presentative clauses in which the indefinite noun phrase functions as the subject typically take the form of an  $^{\circ}$ expletive construction like (19a). When the indefinite noun phrase has some other function in the clause, as in (19b), presentative clauses are not formally marked.

- (19) • Presentative clauses  
       a. Er ligt een lijk in de tuin.  
           there lies a corpse in the garden  
           'There is a corpse lying in the garden.'  
       b. Ik vond gisteren een lijk in mijn tuin.  
           I found yesterday a corpse in my garden  
           'Yesterday, I found a corpse in my garden.'

The examples in (19) introduce a new entity into domain D, which is therefore not known to the addressee by definition. However, indefinite noun phrases can also be used when the referent could in principle be uniquely identified by the hearer, but the speaker does not want to be too specific, for instance, because that would not be relevant in the given context. An example like this is given in (20): this example is felicitous even if the speaker could have been more specific by referring to the book in question as Jackendoff's *Semantic Structures*; see Section 5.1.1.3 for further discussion.

- (20) Ik heb een boek uit je kast gehaald.  
 I have a book out of your bookcase taken  
 'I have taken a book from your shelves.'

The discussion above amounts to saying that, unlike the case with definite noun phrases, the use of an indefinite noun phrase in presentative clauses does not imply that set A in Figure 1 only contains entities that are part of domain D. It rather contains all entities that satisfy the description of the NP, and the referent of the noun phrase therefore need not be identifiable for the speaker and the hearer. In this sense indefinite noun phrases are typically non-D-linked. The same thing holds for indefinite noun phrases headed by a non-count noun like in *Er staat wijn in de keuken* 'There is wine in the kitchen'; cf. the discussion below (7).

### *III. Special cases*

Subsections I and II have shown that the use of a definite noun phrase indicates that the referent in question is part of domain D, whereas indefinite noun phrases may introduce new referents into domain D. There are, however, certain special restrictions on the use of indefinite noun phrases, which is due to the fact that entities can sometimes also be introduced into domain D by using a definite noun phrase. Without claiming to be exhaustive, we will briefly discuss below some typical situations in which this is possible.

#### *A. Common knowledge*

Picture the following situation. John is walking, and he meets someone he has never seen before. Given that domain D is largely determined by agreement among the participants in the discourse, one would assume that the conversation between John and the other person starts with a *tabula rasa*. However, the fact that John could not utter example (21a) without sounding silly shows that certain entities cannot be introduced into discourse by means of an indefinite noun phrase: (21a) suggests that there is more than one sun that could be relevant in this context, and this conflicts with the knowledge that we normally ascribe to people. Therefore the use of a definite noun phrase is preferred. This shows that the use of definite noun phrases does not entirely depend on domain D, but may also reflect intuitions of the speaker about the extra-linguistic knowledge one can ascribe to all individuals (in his society). Or, to say it differently, some entities like the sun, moon, etc. can be evoked in any conversation without being explicitly part of domain D; simply mentioning the sun is sufficient for any speaker to identify the entity the noun phrase is referring to.

- (21) a. Er komt een zon op.  
           there rises a sun prt.  
           'A sun is rising.'  
       b. De zon komt op.  
           the sun rises prt.

### B. Semantically implied entities

Anyone hearing the sentence in (22) will conclude that the noun phrase *de kleertjes* 'the clothes' refers to the clothes of the baby. This is due to the fact that the verb *aankleden* 'to dress' can be paraphrased as "putting clothes on someone". The fact that the clothes of the baby are semantically implied by the description of the event in the first conjunct apparently makes it unnecessary to introduce the clothes of the baby by means of an indefinite noun phrase.

- (22) Jan wou de baby aankleden, maar de kleertjes waren nog nat.  
 Jan wanted the baby prt.-dress but the clothes were still wet  
 'Jan wanted to dress the baby, but the clothes were still wet.'

### C. Inferable entities

Appealing to the meaning of the verb *aankleden* does not account for the fact that the noun phrase *de kleertjes* in (22) can be replaced by the noun phrase *de luiers* 'the diapers', as in (23). After all, the verb *aankleden* 'to dress' cannot be paraphrased as "putting diapers on someone".

- (23) Jan wou de baby aankleden, maar de luiers waren nog nat.  
 Jan wanted the baby prt.-dress but the diapers were still wet  
 'Jan wanted to dress the baby, but the diapers were still wet.'

The fact that the definite article is acceptable in the second conjunct shows that language users have richly structured schemata of certain events at their disposal. A language user knows that babies generally wear diapers and, as a result, the event of dressing a baby typically evokes the idea of diapers, which therefore need not be introduced by an indefinite noun phrase. These structured schemata are available not only for events but also for entities. Speakers know that a wedding involves a bride and a bridegroom, best man, a priest or a civil servant, etc. Therefore these entities need not be introduced by means of an indefinite noun phrase, but can be referred to directly by means of a definite noun phrase, as in (24a). Similarly, for many people the mere mention of a house is sufficient to evoke a picture of a building with a garden, a front door, a chimney, etc., and as is shown in (24b) these entities can be immediately referred to by means of a definite noun phrase.

- (24) a. Ik was daarnet bij een huwelijk. De bruid was gekleed in een lange witte jurk.  
 I was just now at a wedding the bride was dressed in a long white dress  
 b. Ik heb een huis in Tilburg gekocht. De tuin is heel groot.  
 I have a house in Tilburg bought the garden is very big  
 'I bought a house in Tilburg. The garden is very big.'

The acceptability of examples like (23) and (24) is, of course, due to the fact that parts of the speaker's and listener's conceptions of reality are culturally determined, and therefore have sufficient overlap to invoke the desired inferences in these examples.

*D. Invited inferences*

Occasionally, however, inferences are not socially determined. The use of a definite noun phrase must then be seen as an invitation to the listener to establish some relation between the referent of the definite noun phrase and some known entity in domain D. Consider an example like (25a). Although it is not typically assumed that houses have dogs, the listener is invited to connect the referent of the noun phrase *de hond* to the earlier mentioned house (or, alternatively, to Jan). The most plausible interpretation is that the dog lives in the house (or that Jan has a dog with him). Replacing the definite noun phrase *de hond* by an indefinite one, as in (25b), would not force the listener to adopt such an interpretation; in that case, the referent of *een hond* 'a dog' may equally well be totally unrelated to the referents in domain D.

- (25) a. Jan liep langs het huis. De hond blafte.  
           Jan walked along the house the dog barked  
       b. Jan liep langs het huis. Een hond blafte.  
           Jan walked along the house a dog barked

*E. Conclusion*

This brief discussion of the use of definite and indefinite noun phrases shows that a simple description in syntactic and/or semantic terms is not possible. It is not the case that entities are always introduced in domain D by employing indefinite noun phrases. They can also be evoked by the lexical meaning of words or be made available by common knowledge, including generally available structured schemata of events and entities. The most we can say is that the use of a definite noun phrase indicates that the speaker assumes that the listener is able to assign the intended referent a proper place in domain D by connecting it to some referent that is part of this domain. A full description of the distribution of indefinite and definite noun phrases must therefore appeal to notions from linguistics, semantics, pragmatics and cognition. Since this will clearly take us too far afield here, we refer the reader to Keizer (1992b: chapter 5) and Alexiadou et al. (2007: part II), which provide good overviews of the contributions these fields have made.

*5.1.1.3. Specificity and non-specificity*

The previous section has shown that indefinite noun phrases are typically used to introduce a new entity into domain D or to allow the speaker to be less specific than he could be. What we did not discuss is that an indefinite noun phrase like *een concert* 'a concert' can have at least two readings: either it has a specific reading, in which case it refers to a certain identifiable concert, or it has a nonspecific reading in which case it may refer to just any entity that has the property of being a concert. In many contexts, these two readings are difficult to distinguish. Consider example (26). The speaker of this utterance may or may not know to which concert Jan will go next week: in the first case, the noun phrase *een concert* is specific, referring to a certain concert identifiable by the speaker but not by the addressee, and in the latter case it is nonspecific, referring to a concert that is not identifiable by either the speaker or the hearer.

- (26) Jan gaat volgende week naar een concert.  
       Jan goes next week to a concert

The distinction is rather vague in (26), but can be made clearer in other contexts. First, consider example (27a), which involves the modal verb *willen* 'to want'. When we are dealing with a specific indefinite noun phrase, the speaker is actually claiming that there will be a concert next week, and that he wants to go there (what is called the *de re* reading in the semantic literature). So, a natural continuation of the discourse would be the contention that the speaker will try to get a ticket, as in (27b). When we are dealing with a nonspecific noun phrase, on the other hand, the speaker is not claiming to go to any particular concert and may not even know whether there actually is a concert next week (this is called the *de dicto* reading in the semantic literature), and he could continue by saying that he will have a look whether something interesting is going to take place next week, as in (27b').

- (27) a. Ik wil volgende week naar een concert.  
 I want next week to a concert  
 'I want to go to a concert next week.'
- b. Ik zal morgen een kaartje kopen.  
 I will tomorrow a ticket buy  
 'I will buy a ticket tomorrow.'
- b'. Even kijken of ik iets leuks kan vinden.  
 just look whether I something nice can find  
 'Let's see whether I can find something nice.'

Other contexts in which the two readings of indefinite noun phrases can be easily distinguished involve universal quantification. Consider example (28), which involves the universally quantified time adverb *altijd* 'always'. When we are dealing with a nonspecific indefinite noun phrase, the sentence expresses that the meadow always has one horse or another in it. When the noun phrase is specific, on the other hand, it is always the same horse that is in the meadow.

- (28) Er staat altijd een paard in de wei.  
 there stands always a horse in the meadow  
 'There is always a horse in the meadow.'

The difference between the specific and nonspecific reading has been given several treatments in the literature. The more or less traditional one describes the difference in terms of °scope interactions (e.g., May 1985). It is assumed that the indefinite article is actually an existential operator, and that the ambiguity that arises is due to the fact that this operator may take different scopes with respect to the modal/universal operator expressed by the modal verb or universally quantified expression. The specific reading arises when the existential operator expressed by the indefinite article takes scope over the other operator in the sentence, as in the (a)-examples in (29); the nonspecific reading arises when the existential operator is within the scope of the other operator, as in the (b)-examples.

- (29) a.  $\exists x$  (concert (x) & Jan wants to go to x next week)  
 a'.  $\exists x$  (horse (x) &  $\forall t$  (x is in the meadow at time t))  
 b. Jan wants:  $\exists x$  (concert (x) & Jan goes to x next week)  
 b'.  $\forall t \exists x$  (horse (x) & x is in the meadow at time t)

According to others (e.g., Hornstein 1984), the difference is not related to the scope taking properties of the existential quantifier but to the nature of the noun phrase itself. When the noun phrase is nonspecific, it acts like an existential quantifier in the scope of the modal/universal operator, just as indicated in (29b&b'). When it is specific, on the other hand, it does not behave as an operator but as a constant, that is, a specific indefinite noun phrase like *een paard* actually behaves on a par with a noun phrase like *een zeker paard* 'a certain horse'. Here, we will not go any further into discussing what the proper semantic treatment of the ambiguity of indefinite noun phrases is.

To conclude this section, note that, although definite noun phrases normally refer to a specific entity in domain D, they occasionally allow two readings comparable to the specific and nonspecific readings of indefinite noun phrases. This is especially the case with noun phrases like *de president van de VS* 'the president of the USA' in example (30), the reference of which changes over time: this definite noun phrase may simply refer to a certain person who happens to be the president of the USA at the time of utterance (the specific, *de re* reading), but example (30) is also felicitous in case elections are being held at the time of utterance, so that is not clear who will be the president of the USA next year (the nonspecific *de dicto* reading).

- (30) De president van de VS zal Nederland volgend jaar bezoeken.  
 the president of the USA will the.Netherlands next year visit  
 'The president of the USA will visit the Netherlands next year.'

Something similar holds for examples like (31). The specific reading of the definite noun *de bus* phrase arises in contexts where the speaker may expect the addressee to be able to identify the specific bus he is speaking about, e.g., if the speaker comes from A and there is just one bus going from A to B. This example is, however, also possible with a nonspecific interpretation of the definite noun phrase *de bus*, which may arise in contexts where the addressee cannot be assumed to be able to identify the actual bus that the speaker took, e.g., when there are twelve buses an hour that go from A to B or when there are buses taking different routes; in examples like these, the definite noun phrase is used to refer to a means of transport; see Section 5.1.4.1 for more cases like this.

- (31) Ik ben met de bus gekomen.  
 I am with the bus come  
 'I came with the bus/by bus.'

#### 5.1.1.4. Distributivity

The examples in (32) show that plural definite noun phrases like *de padvinders* 'the scouts' or *de studenten* 'the students' can have either a collective or a distributive reading. The most prominent reading of (32a) is the collective reading, according to which the scouts will build a big tree cabin together; the noun phrase *de padvinders* 'the scouts' is construed as referring to the scouts as a group and we are dealing with a single event of building a hut. The most plausible reading of (32b), on the other hand, is the distributive one according to which each individual student has to write an essay; the noun phrase is construed as a set of individuals and it is

predicated of each of these individuals that he or she is obliged to write an essay, that is, we are dealing with multiple events of writing an essay.

- (32) a. De padvinders moeten een grote boomhut bouwen. [collective]  
 the scouts must a big tree cabin build  
 'The scouts must build a big tree cabin.'
- b. De studenten moeten een opstel schrijven. [distributive]  
 the students must write an essay  
 'The students must write an essay.'

In actual fact, the two examples in (32) are ambiguous; the suggested readings are simply the ones that seem most prominent or plausible given the context, but the other readings can easily be forced by adding an adverbial phrase like *allemaal* 'all' or *samen* 'together'.

- (33) a. De padvinders moeten *allemaal* een grote boomhut bouwen. [distributive]  
 the scouts must all a big tree cabin build  
 'The scouts must all build a big tree cabin.'
- b. De studenten moeten *samen* een opstel schrijven. [collective]  
 the students must together an essay write  
 'The students must write an essay together.'

Recall that plural definite noun phrases refer to the complete set of entities denoted by the NP in domain D. In this respect, definite noun phrases resemble universally quantified noun phrases like *alle padvinders*. The latter, however, do not easily allow a collective reading, which is clear from the fact that an example like (34) strongly disfavors a reading according to which the scouts are cooperating in building a single tree cabin; each scout has to build his own hut.

- (34) Alle padvinders moeten (\**allemaal*/<sup>??</sup>*samen*) een boomhut bouwen.  
 all scouts must all/together a tree cabin build  
 'All scouts must build a tree cabin.'

The examples above all involve an indefinite direct object. Therefore one may think that the ambiguity between the collective and the distributive reading of the plural definite noun phrase is related to the specific/nonspecific reading of the indefinite noun phrases. Example (35a) shows that this is not the case; here, the direct object is definite, but still the sentence allows a reading according to which the song was sung only twice (by the group), or a reading where the song was sung more often (twice by each individual member of the group). Example (35b) allows only the latter reading, as predicted by the discussion of the difference between plural definite and universally quantified noun phrases; cf. example (34).

- (35) a. De jongens hebben het lied twee keer gezongen. [ambiguous]  
 the boys have the song two times sang  
 'The boys sang the song twice.'
- b. Alle jongens hebben het lied twee keer gezongen. [distributive]  
 all boys have the song two times sang  
 'All boys sang the song twice.'



Although judgments are subtle, changing the order of the direct object and the adverbial phrase *twee keer* in (35a), as in (36a), seems to disfavor the distributive reading of the subject, which may be due to the fact that the direct object is in the scope of this quantified adverbial phrase. Changing the order of the direct object and the adverbial phrase in (35b), as in (36b), seems to lead to a somewhat marked result and still does not seem to allow a collective reading of the subject. Insofar as these judgments are correct, they support the claim that *alle* has a distributive reading only. We leave this to future research.

- (36) a. De jongens hebben twee keer het lied gezongen. [collective preferred]  
           the boys have two times the song sang  
       b. ?Alle jongens hebben twee keer het lied gezongen. [distributive]  
           all boys have two times the song sang

#### 5.1.1.5. Genericity

The sections above have shown that noun phrases are generally used to refer to certain entities in domain D. In this section, we will discuss *GENERIC* noun phrases, such as those given in example (37). In examples like these, the property denoted by the verb phrase is not predicated of any entity in domain D; the examples express a general rule that is assumed to be true in the speaker's conception of reality. In other words, by uttering one of the generic examples in (37), the speaker claims, roughly, that, regardless of the actual choice of domain D, all zebras are striped.

- (37) a. De zebra is gestreept.  
           the zebra is striped  
       b. Een zebra is gestreept.  
           a zebra is striped  
       c. Zebra's zijn gestreept.  
           zebras are striped

Note that genericity is a property not only of the noun phrase, but also of the sentence as a whole. It is therefore not surprising that generic sentences have certain distinctive properties. For instance, the examples in (37) are given in the present tense, because this seems to favor the generic interpretation. This holds especially for (37a&b): replacing the present tense in these examples by a past tense results in constructions that are preferably construed as contentions about a certain individual zebra/set of zebras, and that can only marginally be interpreted as general statements on states of affairs valid for some time interval in the past. This section, however, will mainly focus on the properties of the noun phrase, though some of the properties of the generic clause as a whole will also be discussed as we go along. Section 5.1.1.5.1 starts by discussing generic uses of noun phrases headed by count nouns. This is followed in 5.1.1.5.2 by a discussion of generic noun phrases headed by non-count nouns.

##### 5.1.1.5.1. Count nouns

The examples in (37) have shown that count nouns can enter three types of generic noun phrases: when the noun is singular, the article can be either definite or indefinite, and when it is plural it is normally the indefinite null article that is used.

### 1. Definite versus indefinite articles

Broadly speaking, definite noun phrases refer to the whole class or a prototype thereof, whereas indefinite noun phrases refer to typical members of the class. The fact that definite noun phrases may refer to the whole class, whereas indefinite noun phrases cannot, is clear from the examples in (38). The examples in (38b&c) are semantically anomalous since the predicate *uitgestorven* 'extinct' can only be predicated of a species as a whole, as in (38a), not of the individual members of a species. Similar examples that do not involve natural species are given in (39).

- (38) a. De Dodo is uitgestorven.  
the Dodo is extinct  
b. \*Een Dodo is uitgestorven.  
a Dodo is extinct  
c. \*<sup>?</sup>Dodo's zijn uitgestorven.  
Dodos are extinct
- (39) a. De telefoon is uitgevonden door Alexander Graham Bell.  
the telephone is invented by Alexander Graham Bell  
b. \*Een telefoon is uitgevonden door Alexander Graham Bell.  
a telephone is invented by Alexander Graham Bell  
c. \*<sup>?</sup>Telefoons zijn uitgevonden door Alexander Graham Bell.  
telephones are invented by Alexander Graham Bell

The examples in (40) show that general statements that are construed as applicable to individual members of the class rather than to the class as a whole prefer a noun phrase headed by the indefinite article *een* or  $\emptyset$ . Since the proposition in (40) only holds for cats departing (to, e.g., a foreign country) and not for the whole species, the generic reading of the definite noun phrase is excluded.

- (40) a. <sup>#</sup>De kat moet zes weken voor vertrek ingeënt worden.  
the cat must six weeks before departure vaccinated be  
b. Een kat moet zes weken voor vertrek ingeënt worden.  
a cat must six weeks before departure vaccinated be  
'A cat must be vaccinated six weeks before departure.'  
c.  $\emptyset$  Katten moeten zes weken voor vertrek ingeënt worden.  
 $\emptyset$  cats must six weeks before departure vaccinated be  
'Cats must be vaccinated six weeks before departure.'

The examples in (41) clearly show that definite noun phrases do not have to refer to classes. The class reading of the definite noun phrase in (41a) is of course impossible, since species do not eat; only individual members of a species do. The difference between the definite and indefinite noun phrases is now that the first refers to a prototype of the class whereas the indefinite noun phrases refer to typical members of the class. This can be made clear by means of the interpretation of adverbs like *meestal* 'generally'. In (41a), this adverb can only be interpreted as an adverb of frequency: 'It is generally the case that the crocodile eats once a week (but not while guarding its eggs)'. This reading is also available for the examples in (41b&c), but in addition the adverb may quantify over the noun phrase subject

resulting in the reading “Most crocodiles eat only once a week (but there are some crocodiles that eat more often)”.

- (41) a. De krokodil eet meestal maar één keer per week.  
           the crocodile eats generally only once a week  
           ‘Most of the time, the crocodile eats only once a week.’  
       b. Een krokodil eet meestal maar één keer per week.  
           a crocodile eats generally only once a week  
           ‘Most of the time, a crocodile eats only once a week.’  
           ‘Most crocodiles eat only once a week.’  
       c. Krokodillen eten meestal maar één keer per week.  
           crocodiles eat generally only once a week  
           ‘Most of the time, crocodiles eat only once a week.’  
           ‘Most crocodiles eat only once a week.’

This difference becomes even clearer when the verb phrase denotes an °individual-level predicate like *intelligent zijn* ‘to be intelligent’, that is, a predicate that denotes a more or less permanent property of its °logical SUBJECT. An example like (42a) is considered distinctly odd by most speakers, since it expresses that most of the time the rat is intelligent, that is, it forces stage-level interpretation on the adjective *intelligent*. The examples in (42b&c), on the other hand, sound perfectly natural under the reading “most of”.

- (42) a. %De rat is meestal erg intelligent.  
           the rat is generally very intelligent  
       b. Een rat is meestal erg intelligent.  
           a rat is generally very intelligent  
           ‘Most rats are very intelligent.’  
       c. Ratten zijn meestal erg intelligent.  
           rats are generally very intelligent  
           ‘Most rats are very intelligent.’

The crucial difference between the (a)- and the (b/c)-examples in (41) and (42) is that there is only one prototype, whereas there are many typical members of a certain class: as a result only the latter can be quantified. Now that we have discussed some differences between definite and indefinite generic noun phrases, we will continue by discussing the properties of these noun phrases in more detail.

## *II. Definite articles*

This section discusses the generic use of definite noun phrases. Since the noun phrase is normally singular, our discussion starts in Subsection A by considering such cases. This is followed in Subsections B and C by a discussion of whether plural definite noun phrases can also be used generically. The discussion is concluded in Subsection D by giving some examples of definite generic noun phrases embedded within some other noun phrase.

### *A. Singular generic definite noun phrases*

Generic interpretations of definite noun phrases are not encoded in some part of the noun phrase itself, but depend on the semantic content of the construction in which

they occur. An example like (43a) does not trigger a generic interpretation, since it is highly improbable that a stage-level property like being in a cage is a property of (the prototype of) the set of entities denoted by a noun like *zebra* 'zebra'. Therefore, this sentence must be interpreted as a proposition involving a specific entity in domain D. An example like (43a'), which involves the individual-level predicate of "being striped", on the other hand, can be seen as a general statement about (the prototype of) this set of entities. The noun phrase *de zebra* can therefore be given both a generic and a referential interpretation. Note, however, that an example like (43a') is only ambiguous on paper. Leaving contrastive accent aside, the two interpretations are distinguished by accent: on the referential reading of the noun phrase, main accent is given to the adjective *gestreept*; on the generic reading, on the other hand, main accent falls on the noun phrase (the noun *zebra* in this case). A similar difference can be observed in (43b&b').

- |         |                                   |            |
|---------|-----------------------------------|------------|
| (43) a. | De zebra zit in een KOOL.         | [specific] |
|         | the zebra sits in a cage          |            |
| a'.     | De ZEbra is gestreept.            | [generic]  |
|         | the zebra is striped              |            |
| b.      | De vrouw loopt op STRAAT.         | [specific] |
|         | the woman walks in the.street     |            |
| b'.     | De VROUW is zachtmoedig van aard. | [generic]  |
|         | the woman is mild in nature       |            |

The discussion above does not imply that the generic interpretation of definite noun phrases is completely determined by context. This becomes clear when we consider some more examples. All primeless examples in (44) would be conceivable as generic statements, which is clear from the fact that the primed examples, which involve indefinite noun phrases, actually do have the intended meanings. Nevertheless, these examples strongly favor a regular referential meaning, that is, are preferably construed as a contention about a certain entity in domain D.

- |         |                             |     |                           |
|---------|-----------------------------|-----|---------------------------|
| (44) a. | #Het meisje is intelligent. | a'. | Meisjes zijn intelligent. |
|         | the girl is intelligent     |     | girls are intelligent     |
| b.      | #Het boek is duur.          | b'. | Boeken zijn duur.         |
|         | the book is expensive       |     | books are expensive       |
| c.      | #De braadpan is zwaar.      | c'. | Braadpannen zijn zwaar.   |
|         | the frying pan is heavy     |     | frying pans are heavy     |

The reason for the impossibility of the intended generic readings of the primeless examples is not entirely clear. It might be the case that we are simply not inclined to picture a prototypical member of the sets denoted by the nouns in (44). Whereas the noun *vrouw* 'woman' or *zebra* easily evokes a prototype, nouns like *meisje* 'girl', *boek* 'book' or *braadpan* 'frying pan' do not. Perhaps this suggestion can be supported by the fact that a prototypical reading can be evoked provided that the context provides sufficient clues that such a reading is intended. This is clear from the fact that the examples in (45) do allow a generic reading, because the syntactic context makes it probable that two prototypes are compared: in (45a) the comparison involves a prototypical girl of a certain age and a prototypical boy of

the same age, and in (45b) a prototypical girl from the polder and a prototypical girl from the city. It seems, however, that even in these cases the use of an indefinite noun phrase, as in the primed examples, is much preferred by most speakers.

- (45) a. Het meisje is op die leeftijd volwassenere dan de jongen.  
           the girl is at that age more mature than the boy  
       a'. Meisjes zijn op die leeftijd volwassenere dan jongens.  
           girls are at that age more mature than boys  
       b. Het meisje uit de polder is volwassenere dan het meisje uit de stad.  
           the girl from the polder is more mature than the girl from the city  
       b'. Meisjes uit de polder zijn volwassenere dan meisjes uit de stad.  
           girls from the polder are more mature than girls from the city

The generic interpretation of the noun phrases in the primeless examples in (45) is clearly facilitated by the use of the modifiers: in (45a) the use of the adverbial phrase *op die leeftijd* 'at that age' and in (45b) by the attributively used PP *uit de polder/stad* 'from the polder/city'. That attributive modifiers make the generic reading more readily available is also clear from the examples in (46). Perhaps the use of the attributive modifier *gebonden* makes a prototypical reading more readily available due to the fact that it divides the superset of books into two subsets, so that we can compare the prototypical members of these subsets: the prototypical member of the set of bound books is unaffordable, in contrast to the prototypical member of the set of paperbacks or pocket books.

- (46) a. \*?Het boek is tegenwoordig onbetaalbaar.  
           the book is nowadays unaffordable  
       b. Het gebonden boek is tegenwoordig onbetaalbaar.  
           the bound book is nowadays unaffordable

This probably also accounts for the fact that classes that are relatively high in the speaker's taxonomy are normally not preceded by a definite article in generic sentences. Example like (47a) contrast sharply with examples like (43b): the fact that mammals are higher in the taxonomy than zebras apparently makes it easier for the speaker to picture a prototypical zebra than a prototypical mammal. Reference to a typical member is easier, and hence the use of an indefinite article, as in (47b&c), is preferred.

- (47) a. %Het zoogdier is warmbloedig.  
           the mammal is warm.blooded  
       b. Een zoogdier is warmbloedig.  
           a mammal is warm.blooded  
       c. Zoogdieren zijn warmbloedig.  
           mammals are warm.blooded

From the discussion above, we may perhaps conclude that the ambiguity between the regular referential reading and the generic reading of a singular definite noun phrase is related to the question of whether the language user is able to interpret the noun phrase as referring to a prototype of a certain set of entities (where many non-linguistic aspects may play a role).

*B. Plural generic definite noun phrases*

Let us now consider whether plural definite noun phrases are possible in generic statements as well. Examples like (48a&a') can only be interpreted as statements about a contextually determined group of zebras/women. An example like (48b) seems to fare better as a generic statement but this is due to the fact that the NP *grote kat* 'big cat' may be used as the name of the superset containing the subsets of cats denoted by the nouns *leeuw* 'lion', *tijger* 'tiger', etc. In other words, the noun phrase *de grote katten* does not refer to one, but to several species of animals, hence its plural form.

- (48) a. #De zebra's zijn gestreept.  
           the zebras are striped  
       a'. #De vrouwen zijn zachtmoedig van aard.  
           the women are mild in nature  
       b. De grote katten zijn gevaarlijke roofdieren.  
           the big cats are dangerous predators

This seems to lead to the conclusion that plural definite noun phrases cannot be used as generic noun phrases unless the noun phrase denotes a set of entities that can be further divided into several conventionally distinguished subclasses/species. This conclusion seems to be more or less correct, but it turns out that we have to make at least one exception. Consider example (49), taken from Geerts (1984), which involves the same string of words as (48a), but which seems to be perfectly fine on a generic reading. The crucial ingredient of (49) that makes the definite determiner felicitous is the presence of the restrictive modifier *alleen* 'only'; as soon as *alleen* is deleted, the output becomes bad on a generic reading. The restrictive modifier *alleen* is apparently able to license the use of the definite article due to the fact that it evokes a reading in which the set denoted by *zebra* is construed as a proper subset of a larger set, viz., the set denoted by *wilde paarden* 'wild horses'.

- (49) (Er zijn vele soorten wilde paarden, maar) alleen de zebra's zijn gestreept.  
       there are many kinds of wild horses but only the zebras are striped

A similar effect of restrictive modifiers on the legitimacy of a definite determiner in generic plural noun phrases can be detected in the pair in (50), adapted from De Hoop, Vanden Wyngaerd & Zwart (1990: 100ff.). The semantic effect of the addition of the PP-modifier *met witte voetjes* is the creation of a subset of domestic cats with specific bodily features (viz., the possession of white paws); as a result, the definite determiner can now felicitously be used to pick out the intended subset.

- (50) a. #De katten brengen geluk.  
           the cats bring luck  
       b. (Katten hebben een slechte reputatie, maar)  
           cats have a bad reputation but  
           de katten met witte voetjes brengen geluk.  
           the cats with white paws bring luck

The minimal pair in (51) furthermore show that it is only the subset that can occur with the definite article; in (51a) the noun phrase *de katten* refers to a superset which includes the subset referred to by *de katten met witte voetjes* and the use of the definite article gives rise to a degraded result, whereas in (51b) the noun phrase *de zwarte katten* refers to a subset that is contrasted with another subset referred to by *de katten met witte voetjes* and the use of the definite article is allowed.

- (51) a. \*<sup>?</sup>De katten hebben een slechte reputatie, maar  
           the cats have a bad reputation but  
           de katten met witte voetjes brengen geluk.  
           the cats with white paws bring luck  
       b. De zwarte katten hebben een slechte reputatie, maar  
           the black cats have a bad reputation but  
           de katten met witte voetjes brengen geluk.  
           the cats with white paws bring luck

From this we may conclude that the use of the definite article is not related to the fact that the noun phrases in question have a generic reading, but to the fact that these noun phrases are linked to some explicitly mentioned or tacitly assumed superset in domain D. This use of the definite article is therefore reminiscent of the use of the definite article in noun phrases that refer to entities that are not part of domain D but can be inferred from the linguistic or non-linguistic context of the discourse; see the discussion of examples (21) to (25) in Section 5.1.1.2.

*C. Plural generic definite noun phrases headed by, e.g., nationality names*

Although the discussion in Subsection B has shown that plural definite noun phrases normally cannot be used generically, an exception must be made for nationality nouns like *Nederlander* 'Dutchman' or nouns that refer to members of certain societal groups or organizations like *kapitalist* 'capitalist'. With nouns of these types generic statements can therefore often be expressed in four different ways, as illustrated in (52) and (53).

- (52) a. De Nederlander is onverdraagzaam.  
           the Dutchman is intolerant  
       b. De Nederlanders zijn onverdraagzaam.  
           the Dutchmen are intolerant  
       c. Een Nederlander is onverdraagzaam.  
           a Dutchman is intolerant  
       d. Nederlanders zijn onverdraagzaam.  
           Dutchmen are intolerant
- (53) a. De kapitalist denkt alleen aan zijn eigen belangen.  
           the capitalist thinks only of his own interests  
       b. De kapitalisten denken alleen aan hun eigen belangen.  
           the capitalists think only of their own interests  
       c. Een kapitalist denkt alleen aan zijn eigen belangen.  
           a capitalist thinks only of his own interests  
       d. Kapitalisten denken alleen aan hun eigen belangen.  
           capitalists think only of their own interests

#### D. Generic definite noun phrases embedded in other noun phrases

So far, we have only discussed generic definite noun phrases in clauses. As is shown in (54a), definite noun phrases can also obtain a generic reading when embedded in a larger noun phrase. The difference between (54a) and (54b) suggests that in this case the context also determines whether a generic reading is possible or not.

- (54) a. [de rechten van [de vrouw]]  
the rights of the woman  
✓ 'the woman's rights' [specific]  
✓ 'women's rights' [generic]
- b. [de vrienden van [de vrouw]]  
the friends of the woman  
✓ 'the woman's friends' [specific]  
\* 'women's friends' [generic]

Note that example (54a) is genuinely ambiguous only on paper; when pronounced in a neutral context, the generic reading will give rise to main stress on *vrouw*, while the specific reading assigns main prosodic prominence to *rechten*. This is shown in (55), where the verbal predicate blocks a generic reading of *de vrouw* in (55a), but strongly favors it in (55b).

- (55) a. De RECHTEN van de vrouw werden haar allemaal ontnomen.  
the rights of the woman were her all taken away  
'The rights of the woman (e.g. Marie) were all taken away from her.'
- b. De rechten van de VROUW worden nog niet universeel erkend.  
the rights of the woman are yet not universally recognized  
'Women's rights are not yet universally recognized.'

The contrast between the examples in (54a) and (56) shows again that definite plural noun phrases are normally not assigned a generic reading.

- (56) [de rechten van [de vrouwen]]  
 the rights of the women  
 ✓ 'the women's rights' [specific]  
 \* 'women's rights' [generic]

### III. Indefinite articles

The examples in (37b&c) have shown that indefinite noun phrases can also be used generically. They differ from definite noun phrases in that they do not refer to a prototypical member of the set denoted by the noun. When the indefinite noun phrase is singular it refers to a typical member, and when it is plural it refers to typical members of the set denoted by the noun. In a sense, indefinite generic noun phrases “quantify” over the individuals in the set denoted by the noun; they express a categorical statement of the type “all N ...”. This is clear from the fact that these noun phrases can be modified by adverbial phrases like *in het algemeen* ‘in general’, *meestal* ‘generally’ or *zelden* ‘rarely’, which may modify their “universal” interpretation. This was discussed already on the basis of the examples in (41) and (42). Here, we repeat examples (42b&c) as (57), which must be given the interpretation “most rats are intelligent”.



- (57) a. Een rat is meestal erg intelligent.  
           a rat is generally very intelligent  
       b. Ratten zijn meestal erg intelligent.  
           rats are generally very intelligent

We will start in Subsection A by discussing some differences between generic and non-generic indefinite noun phrases. This is followed in Subsection B by a discussion of the differences between singular and plural generic indefinite noun phrases.

*A. Differences between generic and non-generic indefinite noun phrases*

Generic indefinite noun phrases differ in syntactic behavior from the non-generic ones. Consider the examples in (58). Non-generic indefinite DPs headed by an indefinite article do not occur in the regular subject position, whereas generic indefinite noun phrases introduced by the article *een*/ $\emptyset$  must occur in this position, which is clear from the fact that they cannot enter the °expletive construction discussed in Section 8.1.4; the noun phrases in (58a&a') receive a non-generic interpretation, whereas those in (58b&b') receive a generic interpretation.

- (58) a. Er zwemt een vis in het water. [non-generic]  
           there swims a fish<sub>sg</sub> in the water  
       a'. Er zwemmen vissen in het water. [non-generic]  
           there swim fish<sub>pl</sub> in the water  
       b. Een vis zwemt in het water. [generic]  
           a fish<sub>sg</sub> swims in the water  
       b'. Vissen zwemmen in het water. [generic]  
           fish<sub>pl</sub> swim in the water

It may be, however, that an exception must be made for generic statements of the type in (59). These examples are generic but not in the same sense as the examples discussed earlier: they do not involve a categorical statement about the members of the set denoted by the NP *goed mes* 'good knife', but a generic statement about the activity denoted by the noun phrase *dit soort werk* 'this kind of work'; when one does this (kind of) work, a good knife is/good knives are indispensable. Therefore, if we want to categorize the subject noun phrases in (59) as non-generic, we must rephrase our earlier findings a bit: it is only in generic clauses that indefinite noun phrases introduced by *een*/ $\emptyset$  can occupy the regular subject position. Since, to our knowledge, examples like (59) have not been discussed in the literature, we will not address them any further.

- (59) a. Een goed mes is onmisbaar voor dit (soort) werk.  
           a good knife is indispensable for this kind.of work  
       b. Goede messen zijn onmisbaar voor dit (soort) werk.  
           good knives are indispensable for this kind.of work

*B. Differences between singular and plural generic indefinite noun phrases*

So far, we have not discussed the difference between the singular and plural generic indefinite noun phrases. Although at first sight it seems difficult to pinpoint a difference in meaning, it is clear that they are not synonymous. This becomes

evident when we consider the implication relations that hold between singular and plural examples, as in the primeless and primed examples in (60).

- (60) a. Een zebra is gestreept  $\Rightarrow$  a'. Zebra's zijn gestreept  
           a zebra is striped           zebras are striped  
       b. Musicals zijn populair  $\nRightarrow$  b'. Een musical is populair  
           musicals are popular       a musical is popular

It seems that implication relations like (60a) are always valid. The inverse implication relation in (60b), on the other hand, does not seem to hold. This suggests that generic sentences with an indefinite singular noun phrase express that the typical members of the class are in some sense inherently endowed with or defined by the property denoted by the predicate. Generic sentences with an indefinite plural noun phrases, on the other hand, seem to ascribe a more incidental or transitory property to the class: musicals may be popular today, but there is no guarantee that this will also be the case in the future. That something like this is indeed the case is clear from the fact that using an adverbial phrase like *tegenwoordig* 'nowadays' is possible in (61a) but not in (61b).

- (61) a. Musicals zijn tegenwoordig populair.  
           musicals are nowadays popular  
       b. \*Een musical is tegenwoordig populair.  
           a musical is nowadays popular

There are also differences concerning the syntactic environments in which singular and plural generic indefinite noun phrases can occur. Above, we have only discussed examples in which the generic noun phrase acts as the subject of a clause. When we widen our discussion to other syntactic functions, it seems that generic singular noun phrases have a more limited distribution than the plural ones. The primeless, singular examples in (62) must be construed specifically: Jan is studying or fond of a certain zebra. The primed, plural examples, on the other hand, seem to readily allow a generic interpretation of the indefinite noun phrase. The doubly-primed examples are added for completeness' sake, in order to show that generic definite noun phrases may also be used in syntactic functions other than subject.

- (62) a. #Jan bestudeert een zebra.                   b. #Jan is dol op een zebra.  
           Jan studies a zebra                       Jan is fond of a zebra  
       a'. Jan bestudeert zebra's.                   b'. Jan is dol op zebra's.  
           Jan studies zebras                       Jan is fond of zebras  
       a''. Jan bestudeert de zebra.                   b''. Jan is dol op de zebra.  
           Jan studies the zebra                   Jan is fond of the zebra

It must be noted, however, that we cannot conclude from these examples that generic singular indefinite noun phrases can only occur as the subject of the clause. This is clear from the examples in (63). In these examples the indefinite noun phrases are not the subject of the clause, but still the sentences can be interpreted generically (which reading is facilitated when a modifier like *meestal* is added to the sentence). The main difference between (62) and (63) is that the examples in the latter contain a °complementive that is predicated of the indefinite noun phrase.

From this, we may conclude that a generic singular indefinite noun phrase can only occur when it is the °logical SUBJECT of some predicate, whereas generic plural noun phrases are freer in distribution.

- (63) a. Ik vind een zebra (meestal) erg interessant.  
I consider a zebra generally very interesting  
b. Ik vind zebra's (meestal) erg interessant.  
I consider zebras generally very interesting

To conclude this subsection, we give the primeless examples in (64) to show that generic indefinite noun phrases can also be embedded in a larger noun phrase. The meaning of these examples is something like “all zebras have a biotope that consists of ...”. As is shown in the primed examples, the larger noun phrase containing a singular indefinite noun phrase also has a more restricted distribution than the one containing a plural indefinite noun phrase; (64a') is at least preferably construed as involving the biotope of a certain zebra.

- (64) a. Het biotoop van een zebra bestaat uit ...  
the biotope of a zebra consists of  
a'. #Jan bestudeert het biotoop van een zebra.  
Jan studies the biotope of a zebra  
b. Het biotoop van zebra's bestaat uit ...  
the biotope of zebras consists of  
b'. Jan bestudeert het biotoop van zebra's.  
Jan studies the biotope of zebras

5.1.1.5.2. *Non-count nouns*

Non-count nouns normally cannot be preceded by the indefinite article *een*. They are either preceded by a definite article or by the indefinite null article. Table 2 gives some examples of several subtypes. Subsection I starts by showing that these non-count nouns also allow a generic reading, and Subsection II continues with a discussion of some general restrictions on the distribution of generic noun phrases headed by a non-count noun.

Table 2: *Non-count nouns*

|                |              | DEFINITE                                                                                                                                                 | INDEFINITE                                                                |
|----------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| SUBSTANCE NOUN |              | <i>de wijn</i> ‘the wine’<br><i>het fruit</i> ‘the fruit’                                                                                                | Ø <i>wijn</i> ‘wine’<br>Ø <i>fruit</i> ‘fruit’                            |
| ABSTRACT NOUN  | NON-DEVERBAL | <i>de armoede</i> ‘the poverty’<br><i>het verdriet</i> ‘the sadness’                                                                                     | Ø <i>armoede</i> ‘poverty’<br>Ø <i>verdriet</i> ‘sadness’                 |
|                | DEVERBAL     | <i>het roken</i> ‘the smoking’<br><i>het sigaren roken</i><br>‘the smoking of cigars’<br><i>het roken van deze sigaar</i><br>‘the smoking of this cigar’ | Ø <i>roken</i> ‘smoking’<br>Ø <i>sigaren roken</i><br>‘smoking of cigars’ |

### I. Generic and non-generic readings

This section discusses the generic and non-generic uses of substance nouns, which is followed by a discussion of non-deverbal and verbal abstract non-count nouns.

#### A. Substance nouns

When a definite article combines with a substance noun like *wijn* 'wine' or *fruit* 'fruit', in many cases a specific interpretation for the resulting noun phrase ensues; the definite noun phrase refers to a contextually determined quantity of the substance in question. It is not impossible, however, to find substance nouns with a definite determiner that receive a generic interpretation; example (65) gives some instances of both uses.

- (65) a. De wijn/Het fruit is lekker. [specific]  
           the wine/the fruit is nice  
       a'. De wijn/Het fruit is duur dit jaar. [generic]  
           the wine/the fruit is expensive this year  
       b. [De smaak van [de wijn/het fruit]] is redelijk goed. [specific]  
           the taste of the wine/the fruit is reasonably good  
       b'. [De prijs van [de wijn/het fruit]] is hoog dit jaar. [generic]  
           the price of the wine/the fruit is high this year

The singular indefinite article *een* normally cannot be combined with non-count nouns. The examples in (66) show, however, that the indefinite null article  $\emptyset$  can be used. When the resulting noun phrase functions as subject, its interpretation depends on its position in the clause: when the noun phrase occupies the regular subject position, as in (66a), it must be interpreted generically; when the noun phrase enters the expletive construction, as in (66a'), it is always interpreted as a non-generic, indefinite noun phrase. In other functions, the interpretation of the noun phrase depends on the denotation of the verb phrase, as can be seen by comparing the two (b)-examples.

- (66) a. [ $\emptyset$  Wijn] is lekker. [generic]  
            $\emptyset$  wine is nice  
       a'. Er ligt nog wijn in de kelder. [non-generic]  
           there lies still wine in the cellar  
       b. Jan houdt van wijn. [generic]  
           Jan likes wine  
       b'. Jan heeft wijn gekocht. [non-generic]  
           Jan has wine bought

When the indefinite noun phrase is embedded within a larger noun phrase, it is also the context that determines whether a generic reading is available. The (a)-examples in (67) show this for substance nouns embedded in a subject, and the (b)-examples for substance nouns embedded in a direct object.

- (67) a. [Het glas met [Ø wijn]] viel om. [non-generic]  
 the glass with wine fell over  
 'The glass containing wine tumbled.'  
 a'. [De prijs van [Ø wijn]] is hoog dit jaar. [generic]  
 the price of wine is high this year  
 'Wine is expensive this year.'  
 b. Jan heeft nog [een vat met [Ø goede wijn]]. [non-generic]  
 Jan has still a barrel with good wine  
 b'. Jan beschreef [de smaak van [Ø goede wijn]]. [generic]  
 Jan described the taste of good wine

### B. Non-deverbal abstract non-count nouns

Non-deverbal abstract non-count nouns can likewise be construed with the definite articles *de* and *het* without necessarily receiving a specific interpretation. Again, the context determines the distribution of specific and generic readings.

- (68) a. De armoede/Het verdriet is ondraaglijk. [specific]  
 the poverty/the sadness is unbearable  
 a'. De armoede/Het verdriet moet bestreden worden. [generic]  
 the poverty/the sadness must eradicated be  
 b. [de ondraaglijkheid van [de armoede/het verdriet]] [specific/generic]  
 the unbearableness of the poverty/the sadness  
 b'. [De beperking van [de armoede/het verdriet]] heeft prioriteit. [generic]  
 the reduction of the poverty/the sadness has priority

Abstract non-count nouns in argument positions normally cannot be combined with the indefinite article *een* without triggering a special, exclamative interpretation; cf. Section 5.1.4.2. However, the addition of a restrictive modifier may license it: *Er heerst daar een \*(ondraaglijke) armoede* 'there is an unbearable poverty there'; *Hij heeft een \*(onzegbaar) verdriet* 'He has an ineffable sadness'. However, as far as we can tell, such indefinite noun phrases are not readily possible in generic contexts; the examples in (69), at least, are somewhat odd.

- (69) a. <sup>?</sup>Een ondraaglijk verdriet is moeilijk te bestrijden.  
 an unbearable sadness is hard to eradicate  
 b'. <sup>?</sup>Een onzegbaar verdriet kan tot zelfmoord leiden.  
 an ineffable sadness can to suicide lead

Abstract non-count nouns occurring with the null article, on the other hand, are possible in generic contexts. As with the substance nouns, this is the normal interpretation when an indefinite noun phrase occupies the regular subject position. In order to obtain a non-generic reading, an indefinite subject must occur in the expletive construction. When the indefinite noun phrase has some other syntactic function in the sentence, the context determines whether a generic interpretation is possible or not. When the indefinite noun phrase is embedded in a larger noun phrase the generic reading of the indefinite noun phrase is the most prominent one.

- (70) a. Er wordt hier nog steeds [Ø armoede] geleden. [non-generic]  
 there is here still poverty suffered  
 a'. [Ø Armoede] is onduelbaar in een rijk land als Nederland. [generic]  
 Ø poverty is intolerable in a rich land like the Netherlands  
 b. Sommige mensen lijden hier nog steeds [Ø armoede]. [non-generic]  
 some people suffer here still poverty  
 b'. Deze regering mag [Ø armoede] niet accepteren. [generic]  
 this government may poverty not accept  
 c. [de schande van [Ø armoede]] [generic]  
 the disgrace of poverty

### C. Deverbal abstract non-count nouns

Here we will restrict our discussion to infinitival nominals; cf. Sections 1.3.1.2 and 2.2.3.2. We start with BARE-INF nominalizations (without an article). Since (71a) is derived from the intransitive, habitual verb *roken* 'to smoke', it is not surprising that nominalizations like these are generally generic; cf. *Jan rookt* 'Jan smokes, that is, Jan is a smoker'. The same thing holds for (71b) due to the fact that the nominalized phrase contains a bare plural noun, which seems generically construed in this example; cf. *Jan rookt sigaren* 'Jan smokes cigars, that is, Jan is a smoker of cigars'.

- (71) a. Roken is slecht voor je gezondheid.  
 smoking is bad for one's health  
 b. Sigaren roken is slecht voor je gezondheid.  
 cigar smoking is bad for one's health

DET-INF nominalizations (preceded by the neuter article *het*) can also inherit the arguments of the verb. The examples in (72) show that when the arguments precede the infinitive, they must be realized as indefinite plural noun phrases, just as in the case of the BARE-INF nominalizations, but in this case the nominalizations clearly refer to specific "smoking" events, so we may safely claim that we are dealing with non-generic uses of these noun phrases.

- (72) a. In deze zaal irriteert het roken me altijd.  
 in this room annoys the smoking me always  
 'In this room I always get annoyed by the smoking.'  
 b. In deze zaal irriteert het sigaren roken me altijd.  
 in this room annoys the cigars smoking me always

The examples in (73) further show that when we place these noun phrases in contexts that favor a generic interpretation, the result is marginal at best.

- (73) a. <sup>??</sup>Het roken is slecht voor je gezondheid.  
 the smoking is bad for one's health  
 b. <sup>??</sup>Het sigaren roken is slecht voor je gezondheid.  
 the cigars smoking is bad for one's health

When the argument follows the infinitive, there are no restrictions on its realization; it can be plural or singular, and it can be indefinite or definite. The (a)-examples in

(74) show that the choice between the latter two options affects the interpretation of the noun phrase as a whole: when the argument is a bare plural noun phrase, the generic reading of the nominalized phrase is clearly favored; when the argument is definite, on the other hand, a generic reading seems to be blocked. The (b)-examples show that as a result of this, use of a definite argument is excluded in contexts that favor a generic interpretation.

- (74) a. Het roken van sigaren irriteert me. [generic]  
           the smoking of cigars annoys me  
       a'. <sup>(?)</sup>Het roken van de sigaar/sigaren irriteert me. [specific]  
           the smoking of the cigar/cigars annoys me  
       b. Het roken van sigaren is slecht voor je gezondheid. [generic]  
           the smoking of cigars is bad for one's health  
       b'. <sup>??</sup>Het roken van de sigaar/sigaren is slecht voor je gezondheid.  
           the smoking of the cigar/cigars is bad for one's health

Note, however, that definite noun phrases introduced by a demonstrative are possible in contexts like (74b&b'): when the noun phrase is singular, a specific reading is triggered; when it is plural, or a substance noun like *tabak* 'tobacco', both readings are available.

- (75) a. Het roken van deze/die sigaar is slecht voor je gezondheid. [specific]  
           the smoking of this/that cigar is bad for your health  
       b. Het roken van deze/die sigaren is slecht voor je gezondheid. [specific/generic]  
           the smoking of these/those cigars is bad for your/one's health

Let us finally turn to cases that involve nominalized phrases embedded in a larger noun phrase. Given the contrast between the examples in (71) and (73), the judgment on example (76a) is surprising. This example clearly has a generic interpretation, but nevertheless the nominalized phrase must be preceded by the definite article. The judgments on the remaining examples (76b&c) are in accordance with the judgments on the examples in (74).

- (76) a. [De bestrijding van [het/<sup>??</sup>Ø (sigaren) roken]] heeft prioriteit. [generic]  
           the eradication of the/Ø cigars smoking has our priority  
       b. [het plezier in [het roken van sigaren]] [generic]  
           the pleasure of the smoking of cigars  
       c. [het plezier in [het roken van de/deze sigaar]] [specific]  
           the pleasure of the smoking of the/this cigar

## II. Distributional restrictions on the generic readings

Although we have seen in Subsection IA that definite noun phrases headed by a substance noun can be used generically, it is certainly not true that this holds in all cases. This will become clear by comparing the two examples in (77), which seem to show that the realization of the definite article is sensitive to the nature of the predicate; the definite article is possible (and perhaps even preferred) when we are dealing with a °stage-level predicate like *duur* 'expensive' in (77a), but not when

we are dealing with an individual-level predicate like *bestaan uit koolstof en waterstof* ‘to consist of carbon and hydrogen’ in (77b).

- (77) a. De/<sup>?</sup>Ø benzine is weer duur        dit jaar.  
           the/Ø petrol    is again expensive this year  
           ‘The petrol is again expensive this year.’  
       b. Ø/\*De benzine bestaat   uit koolstof en waterstof.  
           Ø/the petrol        consists of carbon and hydrogen

An apparent counterexample to the claim that the nature of the predicate determines whether a definite article can be realized can be found in (78) which involve the individual-level predicate *bestaan uit waterstof en zuurstof*: the fact that using a definite article is blocked in (78a) is compatible with the proposed restriction; however, when a restrictive modifier like the PP *op Mars* ‘on Mars’ is added to the generic noun phrase, as in (78b), using a definite article suddenly becomes possible.

- (78) a. Ø/\*Het water bestaat   uit waterstof en zuurstof.  
           Ø/the water    consists of hydrogen and oxygen  
       b. Het/Ø water op Mars bestaat   ook uit waterstof en zuurstof.  
           the/Ø water on Mars   consists also of hydrogen and oxygen

We may account for this problem by assuming that, much as in the case of (50b), the semantic effect of the addition of the modifier in (78b) is the creation of a subset/subtype of water; while *water* on its own defines “water” exhaustively and does not leave any subset/subtype for the definite determiner to pick out, *water op Mars* denotes a subtype of water found on the planet of Mars, which is not coextensive with the substance of water in general. This makes it possible for the definite determiner to be felicitously used in (78b).

From the discussion above, we conclude that, apart from those cases where the addition of a modifier introduces a distinction between various subsets/subtypes, the definite article cannot be used when the predicate expresses an individual-level property. This conclusion seems to be supported by the examples in (79), which involve abstract non-count nouns.

- (79) a. Ø/\*De gezelligheid kent    geen tijd.  
           Ø/the coziness        knows no time  
           ‘Being sociable is always appropriate.’  
       b. Ø/\*De verliefdheid    is een alles overspoelend gevoel.  
           Ø/the infatuation     is an everything overflowing sensation  
           ‘Infatuation is a sensation that dominates everything.’

The infinitival nominals in (80) exhibit a pattern which is also similar yet subtly distinct from the one found in the substance noun examples in (78); cf. Hoekstra & Wehrmann (1985). Example (80a) shows again that individual-level predicates do not license the presence of a definite article: when the definite article is present, the noun phrase refers to a specific dancing event. The examples in (80b&c) show that adding a postnominal PP to the nominalization makes it possible to have a definite article due to the fact that we now dealing with various subtypes of dancing.



- (80) a. Ø/<sup>#</sup>Het dansen is leuk.  
          Ø/the dancing is nice  
      b. Het/Ø dansen op blote voeten moet sterk worden ontraden.  
          the/Ø dancing on bare feet must strongly be discouraged  
      c. Het/<sup>??</sup>Ø dansen van samba's is een geliefde bezigheid van Brazilianen.  
          the/Ø dancing of sambas is a favorite occupation of Brazilians

The surprising fact is that whereas the definite article is simply optional in (80b), it is preferably present in (80c). The roots of this difference with respect to the optionality of the article are as yet unclear. It is not the case, for instance, that the presence of a complement like *van samba's*, as opposed to an adjunct like *op blote voeten*, makes *het* obligatory, which is clear from the fact that *(het) werken aan je proefschrift is leuk* '(the) working on your dissertation is nice' is grammatical both with and without the determiner. However, it is interesting to note that, although Dutch and English differ in that English does not allow a definite article in nominalizations where *het* is optional in Dutch, the two languages are perfectly on a par when it comes to the obligatory realization of the definite article preceding nominalizations with a postnominal *van/of*-complement: cf. the contrast between *(the) dancing on bare feet* and *\*(the) dancing of sambas*.

5.1.1.6. *Summary*

The previous sections have shown that the article may perform several functions. A definite article may pick out a certain entity or a set of entities from the domain of discourse (domain D). In the latter case, the set can be construed as a set of individuals (the distributive reading) or as a whole (the collective reading). Further, it can be used generically, in which case the noun phrase is construed as referring to (the prototype of) a class. Indefinite articles may be presentational, that is, introduce a new entity into domain D, or refer to an entity in domain D that is not assumed to be identifiable by the hearer. In both cases, two subcases can be distinguished: when the entity is known to the speaker we are dealing with a specific noun phrase; when it is not known to the speaker, we are dealing with a nonspecific entity. Finally, indefinite articles can be used in generic noun phrases, in which case we are dealing with categorical statements. This leads to the classification of the articles in Figure 2.

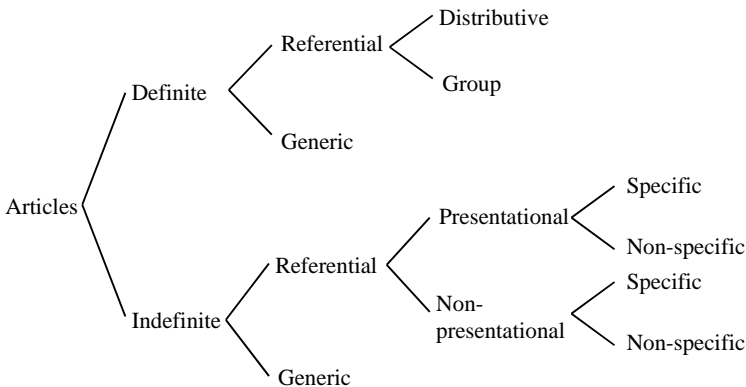


Figure 2: *Classification of Articles*

It must be noted, however, that there are many special cases where the use of the article is not covered by this classification. A discussion of these special cases can be found in Section 5.1.4.

### 5.1.2. Noun phrases without an article

This section will discuss noun phrases that normally do not contain an article, proper nouns and vocatives, as well as a number of more special cases. Note that we will not discuss here the types of language use that favor economizing on language in the sense that only the most important chunks of information are spelled out, as in telegrams or newspaper headlines. Articles are typically suppressed in these cases. A telegram informing the recipient that the car has broken down and that the dog has run away would get the form in (81a). The same thing holds for headlines: (81b) is much preferred to *Een man heeft een hond gebeten* ‘A man has bitten a dog’. Article drop also occurs on signposts, in titles of paintings and books, etc.

- (81) a. Auto kapot. Hond weggelopen.  
           car broken dog run.away  
       b. Man bijt hond.  
           man bites dog

#### 5.1.2.1. Proper nouns

The examples in (82) show that proper nouns are normally not preceded by an article in Standard Dutch. Given the fact that proper nouns are normally used to uniquely identify an entity in the domain of discourse (domain D), this is not really surprising. Since the function of an indefinite article is mainly to convey that at least one entity satisfies the description of the NP, its addition is superfluous in the case of a proper noun. And since the function of a definite article is to indicate that the entity referred to can be uniquely identified, its use would lead to redundancy since proper nouns typically have a unique referent. As a consequence, addition of an article to proper nouns like *Marie* and *Rotterdam* in (82) would lead to a weird result.

- (82) a. Marie woont in Rotterdam.  
           Marie lives in Rotterdam  
       b. Ik zag Marie gisteren.  
           I saw Marie yesterday  
       c. Ik ga morgen naar Rotterdam.  
           I go tomorrow to Rotterdam

Despite its semantic redundancy, definite articles can co-occur with a proper noun in certain Dutch dialects and in Standard German: cf. German *der<sub>nom</sub> Peter* ‘the Peter’. The fact that a determiner is possible in these cases might be related to the fact that its presence allows case to be morphologically expressed, as is clear from the nominative marking on the German article in the example above. The impossibility of the definite article in Standard Dutch may therefore be related to the absence of morphological case marking in this language. For more discussion on the use of articles with proper nouns, see Alexiadou et al. (2007:183 ff.).

There are several exceptions to the general rule that proper nouns are not preceded by an article, which we will discuss below.

### *I. Articles that are part of the proper noun*

In some cases a definite article can be construed as an inherent part of the name. Some examples of such proper nouns are given in (83).

- (83) a. het Gooi [a region in the center of the Netherlands]  
       b. de Noordzee [the sea between Great Britain and the Netherlands]  
       c. de Westerkerk [a church in Amsterdam]  
       d. (Jan) de Graaf, (Peter) de Vries, (Marie) de Boer [family names]

Examples like (83) are not purely a lexical matter, since all kinds of subregularities can be found. We will not extensively discuss these here, but simply summarize the main findings from Haeseryn et al. (1997), to which we refer for further details and more examples. The definite article is common with geographical names but not with names of continents, nations, counties and cities, except when the name is a syntactic plural (*de Hebriden* ‘the Hebrides’) or when the organization form is part of the name (*de Sovjet Unie* ‘the Soviet Union’). Geographical names with a definite article involve the names of mountains (*de Snowdon*<sub>sg</sub> ‘the Snowdon’; *de Alpen*<sub>pl</sub> ‘the Alps’), woods (*het Zwarte Woud* ‘the Black Forest’), seas, lakes and rivers (*de Noordzee* ‘the North Sea’; *het IJsselmeer*; *de Rijn* ‘the Rhine’), and celestial bodies (*de maan* ‘the moon’; *de Melkweg* ‘the Milky Way’). Names of buildings, streets, parks, squares, etc. also take a definite determiner (*de Westerkerk*, *het Damrak*, *het Vondelpark*). The same thing holds for names of organizations and societies (*de Algemene Vereniging voor Taalwetenschap* ‘the general society for linguistics’), and names of papers and magazines, especially when they contain the “kind” name (*het Algemeen Dagblad* ‘the general daily’ versus *Lingua*). Finally, the names of cultural periods and certain festivities also take the definite article (*de Renaissance* ‘the Renaissance’; *het Carnaval* ‘Carnival’).

### *II. Modified proper nouns*

#### *A. Restrictive modifiers*

In (84), we see that the geographical proper noun *Rotterdam* cannot be construed with a definite article when on its own, but must be preceded by a definite article when a restrictive postnominal modifier like *van mijn jeugd* is added. The semantic effect of adding the modifier is that *Rotterdam* is no longer construed as uniquely identified; the modifier invokes a reading according to which several different instantiations of Rotterdam can be discerned, which can be located in the past, the present and the future. As a result, the use of the definite article is no longer redundant, and hence (84b) is completely well-formed.

- (84) a. Ik denk vaak aan (\*het) Rotterdam.  
           I think often of the Rotterdam  
       b. Ik denk vaak aan \*(het) Rotterdam van mijn jeugd.  
           I think often of the Rotterdam of my childhood

Under similar conditions, the indefinite article *een* can be licensed. In example (85a), the indefinite noun phrase refers to an (imaginary) instantiation of Rotterdam that does not have a subway, and again the structure is perfectly acceptable. The acceptability of (86a) perhaps suggests that the indefinite article is optional in this case, but the fact that the negative adverb *niet* 'not' in (86b) can intervene between the proper noun and the PP *zonder metro* shows that the two do not form a constituent in this case. This conclusion is supported by the topicalization data in (86c&d), which sharply contrast with those in (85c&d)

- (85) a. Ik kan me een Rotterdam zonder metro niet voorstellen.  
           I can REFL a Rotterdam without subway not imagine  
           'I cannot picture a Rotterdam without a subway.'
- b. \*Ik kan me een Rotterdam niet zonder metro voorstellen.  
 c. Een Rotterdam zonder metro kan ik me niet voorstellen.  
 d. \*Een Rotterdam kan ik me zonder metro niet voorstellen.
- (86) a. Ik kan me Rotterdam zonder metro niet voorstellen.  
           I can REFL Rotterdam without subway not imagine  
 b. Ik kan me Rotterdam niet zonder metro voorstellen.  
 c. ??Rotterdam zonder metro kan ik me niet voorstellen.  
 d. Rotterdam kan ik me niet zonder metro voorstellen.

A restrictive modifier can also be used when the proper noun fails to uniquely identify the intended referent in domain D. This may happen when domain D contains several entities that are called *Jan*. The modifier then aids the listener in picking out the intended referent. An example is given in (87b). As is shown in (87c), the modifier *van hiernaast* may also appear in the absence of the definite article. In this case, the postnominal PP does not function as a restrictive modifier but as a kind of non-restrictive modifier that facilitates the identification of the intended referent of the proper noun by restricting the topic of discourse to the people next door.

- (87) a. \*de Jan  
           the Jan  
 b. de Jan van hiernaast  
           the Jan of next.door  
 c. Jan van hiernaast  
           Jan of next.door

### B. Non-restrictive modifiers

Non-restrictive modifiers may also occur when an article is present, that is, in cases in which reference without the modifier would also be unequivocal. Noun phrases of this kind may be either definite or indefinite. The definite article in (88a) does not, however, imply that there is more than one Peter, one of whom is laughing, but that the property denoted by the adjective *lachende* 'laughing' is applicable to the person referred to as Peter; the implication is that we are dealing with a characteristic property of Peter. The indefinite article in (88b), on the other hand, presents the fact that Peter is laughing as a more incidental property of Peter, and

suggests that there must be some particular reason for this. The article-less example in (88c) evokes what may be called a (non-restrictive) “epithet” reading: again, there is no question of there being more than one Peter in the domain of discourse; the extra information, by close association with the person, becomes more or less part of the proper noun.

- (88) a. Voor de deur stond de lachende Peter.  
           before the door stood the laughing Peter  
       b. Voor de deur stond een lachende Peter.  
           before the door stood a laughing Peter  
       c. Voor de deur stond lachende Peter.  
           before the door stood laughing Peter

Other examples are given in (89) and (90). The definite examples in (89a) and (90a) make statements about Rotterdam and Karl Marx that confirm knowledge previously established. Example (89a) is most natural when it has been mentioned earlier in the discourse that Rotterdam is burning, and (90a) reflects the knowledge of the speaker that Karl Marx had a beard. In the indefinite (b)-examples, by contrast, the modifiers introduce novel, out-of-the-ordinary information about the head noun: Rotterdam had not been mentioned to be in flames before; Karl Marx did not use to wear a beard before.

- (89) a. het brandende Rotterdam  
           the burning Rotterdam  
       b. een brandend Rotterdam  
           a burning Rotterdam
- (90) a. de bebaarde Karl Marx  
           the bearded Karl Marx  
       b. een bebaarde Karl Marx  
           a bearded Karl Marx

Of course, the (a)-examples need not imply that the hearer shares the speaker’s knowledge at the time at which these examples are uttered; if not, the listener will be led to conclude that this is an established fact, and that the attributive modifier is used as a kind of epithet. The sheer mention of *de beeldschone Helena* ‘the ravishing Helen’ in a novel invites the reader to infer that the character in question is extremely beautiful.

### *III. Type versus token readings*

Compare the examples in (90) with those in (91). The difference in acceptability is due to the fact that the adjective *geboren* ‘born’ in (91) expresses an individual-level property of the species (here: *homo sapiens*) to which the referent of the proper noun belongs, which results in a tautology in the case of the definite determiner, and in nonsense in the case of the indefinite article. At least, this holds on the TOKEN reading of the proper noun, that is, where the name is used with reference to the actual individual bearing that name.

- (91) a.  $\$$ de geboren Karl Marx [token]  
           the born Karl Marx  
       b.  $\$$ een geboren Karl Marx [token]  
           a born Karl Marx

On a TYPE reading of the proper noun, however, these examples are acceptable. On this reading *Karl Marx* is not representing the actual individual bearing this name but a set of properties assumed to be embodied by this individual (e.g., being an intellectual with particular leadership capacities). On this reading, the examples in (92) may be equivalent to the ones in (93), where the common noun *volksleider* ‘demagogue’ replaces *Karl Marx*.

- (92) a.  $(?)$ de geboren Karl Marx [type]  
           the born Karl Marx  
       b. een geboren Karl Marx [type]  
           a born Karl Marx
- (93) a. de geboren volksleider  
           the born people.leader  
       b. een geboren volksleider  
           a born people.leader

The type reading forced upon the proper nouns in (92) also shows up in another context in which proper nouns are combined with the indefinite article *een*. In (94) *een Kluivert* denotes the set of salient properties embodied by the individual named Kluivert (a famous Dutch soccer player), not the individual himself. With the indefinite article left out, the meaning changes from the type reading to the token reading, that is, *We hebben Kluivert in de ploeg* means that the person named Kluivert is playing on our team. The type reading can be enhanced by adding the attributive adjective *echt* ‘true’ or *typisch* ‘typical’ to the indefinite noun phrase; in this case dropping the indefinite article does not lead to a token reading but results in ungrammaticality. In passing, note that example (94a) with the indefinite article is also acceptable under the “representative of proper noun set” reading to be discussed in Subsection V below.

- (94) a. We hebben  $\#$ (een) Kluivert in de ploeg. [type]  
           we have a Kluivert in the team  
           ‘We have a player like Kluivert on our team.’  
       b. We hebben  $*$ (een) echte Kluivert in de ploeg. [type]  
           we have a true Kluivert in the team

In the examples in (94) the indefinite article can be replaced by the negative article *geen*, as in (95a). Note, however, that in some contexts the phrase *geen Kluivert* can actually designate the specific individual whose name is Kluivert; example (95b) is a case in point.

- (95) a. We hebben geen (echte) Kluivert in de ploeg.  
           we have no real Kluivert in the team  
       b. Ik zat al een uur te kijken, maar al wie ik zag, geen Kluivert.  
           I sat already an hour to watch but all who I saw no Kluivert  
           'I had been watching for an hour already, but Kluivert I didn't see.'

The type reading of proper nouns preceded by the indefinite article is shown in a somewhat different way by example (96c). Names of languages cannot normally be construed with an article, either definite or indefinite. But when the noun is postmodified, both the definite and the indefinite article are possible. The difference between (96b) and (96c) is on a par with that found in (84b) and (85a). The semantic contributions of the definite and the indefinite article are, respectively, "the type of" and "a type of". Note that it is not possible to replace the articles in (96b&c) by their (in)definite counterparts; the reason for this is not clear.

- (96) a. Hij spreekt Nederlands.  
           he speaks Dutch  
       b. Hij spreekt het/\*een Nederlands van een aristocraat.  
           he speaks the/a Dutch of an aristocrat  
           'He speaks the type of Dutch spoken by an aristocrat.'  
       c. Hij spreekt een/\*het Nederlands dat niemand kan verstaan.  
           he speaks a/the Dutch that nobody can understand  
           'He speaks a type of Dutch that nobody understands.'

#### IV. "For instance"

The indefinite article *een*, when combined with a proper noun, can have various other semantic effects. The first is what we may somewhat redundantly call a specific interpretation of the *een* + proper-noun combination, instantiated by examples such as (97). In examples of this type, the indefinite article may be readily omitted without meaning being affected, which is not surprising given that the proper noun itself already designates a specific individual in the universe of discourse.

- (97) a. Hebben we überhaupt goede kandidaten voor deze baan? [speaker A]  
           have we at all good candidates for this job  
       b. Nou, ik noem bijvoorbeeld (een) Jansen of (een) Pieterse. [speaker B]  
           well I mention for example a Jansen or a Pieterse  
           'Well, Jansen or Pieterse for instance.'

#### V. Representative of proper noun set

Consider the Dutch indefinite article in combination with the family name *Jansen* illustrated in (98). Here, *Jansen* refers to the set of members of the family named Jansen, and the use of *een* picks out one particular member from among this set. In this particular context, the semantics of *een* is similar to its [+SPECIFIC] meaning found when *een* is construed with common nouns.

- (98) a. Ken jij de familie Jansen? [speaker A]  
 know you the family Jansen  
 ‘Do you know the Jansen family?’  
 b. Ja, ik heb nog met <sup>#</sup>(een) Jansen op school gezeten. [speaker B]  
 yes I have PRT with a Jansen on school sat  
 ‘Yes, I went to school together with a (member of the) Jansen (family).’

Surnames can also be used in the plural to refer to more members of a family; example (99a), for instance, can be used to refer to a representative set of a family, e.g., a married couple and their children. Example (99b) gives an example where the noun phrase is used for all members of the family.

- (99) a. De Jansens komen vanavond eten.  
 the Jansens come tonight eat  
 ‘The Jansens are coming to dinner tonight.’  
 b. De Oranjes zijn een oude familie.  
 the Oranjes are an old family

#### VI. “A certain”

The sentence uttered by speaker B in (98) is unambiguous in the context given; but out of context, it allows an alternative reading in which the semantic contribution of *een* is that of English *a certain*, as in (100a). On this reading, the indefinite article is optionally followed by the adjective *zekere* ‘certain’. The implication of using this construction is that the speaker does not know the person in question: for him or her, the name is merely a description distinguishing the referent from people with other surnames; the name does not, however, enable the speaker to (uniquely) identify this referent. Moreover, the implication is that the addressee may not know the person either. In this use, the indefinite article may also appear in a schwa-inflected form, spelled as *ene* and pronounced with the full vowel of the numeral *één*: [e:nə]. When *ene* is used, *zekere* cannot be inserted, as is shown in (100b). Use of *ene* has a pejorative flavor: not only does the speaker not know the person in question, but in addition the impression given is that this person is unimportant, that is, not worth knowing.

- (100) a. Er staat een (zekere) Jansen op je te wachten.  
 there stands a certain Jansen on you to wait  
 b. Er staat ene (\*zekere) Jansen op je te wachten.  
 there stands a certain Jansen on you to wait  
 ‘There is a certain (person called) Jansen waiting for you.’

This use of *een/ene* in combination with proper nouns may be thought of as the opposite of the emphatic use of the definite article in examples of the type in (101). What the emphatic definite article expresses in B’s response is that the person in question is not just any mortal by the name of Eunice Burns, but that she is the unmistakable, well-known, famous, etc. Eunice Burns. More discussion of emphatic definite articles is found in Section 5.1.4.2, sub II.



- (101) a. Er staat ene Eunice Burns voor de deur. [speaker A]  
there stands a Eunice Burns in.front.of the door  
b. Niet *ene* Eunice Burns, *dé* Eunice Burns. [speaker B]  
not *a* Eunice Burns *the* Eunice Burns

### VII. Prototypical/metaphorical reading

With family names, the use of the attributive adjective *echt/typisch* results in a reading of “prototypical member of the family”. Example (102), for instance, expresses that Philip IV has all the prototypical characteristics (in character or appearance) assumed to be common to the individual members of the house of Habsburg.

- (102) Philips de vierde is een echte Habsburger.  
Philip IV is a true Habsburgian  
‘Philip IV is prototypical member of the house of Habsburg.’

This use of proper nouns comes fairly close to the case where a proper noun is not used to refer to the (set of) entities normally referred to by means of a particular name, but is, instead, used metaphorically to refer to some property normally associated with this entity. Thus in the examples in (103), the names of well-known persons or figures with a remarkable feature or talent are used to ascribe these features or talents to some other person. In these cases the proper noun appears in predicative position and is often accompanied by some form of evaluation.

- (103) a. Hij is een echte Nero.  
he is a real Nero  
‘He is a bad person.’  
b. Hij is bepaald geen Bouwmeester.  
he is certainly no Bouwmeester  
‘He is not exactly a great actor.’  
c. Ze beschouwen hem als de Nederlandse Pavarotti.  
they regard him as the Dutch Pavarotti  
‘He is a great tenor.’

### VIII. “Effected object”

One case in which articles are combined with (personal) proper nouns is instantiated by the examples in (104). Here the proper noun acts as a stand-in for a noun denoting an object created by the bearer of the name in question; *een Van Gogh* refers to a painting by Van Gogh, a so-called “effected object” (whence the label).

- (104) a. De Van Gogh bij ons aan de muur is niet echt.  
the Van Gogh with us on the wall is not real  
b. We hebben een Van Gogh aan de muur.  
we have a Van Gogh on the wall

One may wonder whether examples of this type involve direct construal of definite articles with a proper noun. An alternative approach would be to say that what the article is actually being construed with is an elliptic (common) noun denoting the work painted by Van Gogh. In that case, the structure of the relevant noun phrases



Dutch has an extended, argumental use of the vocative where the speaker uses *dokter/dominee* as the subject of a *yes/no*-question, addressing the question to the person referred to by the noun. As illustrated in (109a), the profession nouns can then optionally be preceded by a definite determiner. Finally, constructions like (109b) are typically used in addressing persons who would use the “label” *dokter/dominee* as a vocative for the person under discussion.

- (109) a. Wil (de) dokter/dominee misschien ook een kopje thee?  
wants the doctor/vicar perhaps also a cup [of] tea  
‘Would you also like a cup of tea, doctor/vicar?’  
b. (De) dokter/dominee komt zo.  
the doctor/vicar comes straightaway  
‘The doctor/vicar will be with you in a moment.’

Other profession nouns, like *ober* ‘waiter’, can also be used as vocatives, as is shown in (110a). They are, however, not normal in constructions like (110b&c). Example (110b) is unacceptable without the article, and is stylistically marked even with the article (it has a patronizing ring to it); example (110c) is excluded without the article, and with the article the noun phrase acts as a normal referring expression.

- (110) a. Ober, twee bier, alstublieft.  
waiter two beer please  
b. Wil \*(de) ober ook een biertje?  
wants the waiter also a beer  
c. \*(De) ober komt zo.  
the waiter comes so

Vocatives like *mevrouw* ‘madam’ and *meneer* ‘sir’ can be used in the same way. In examples like (111a), the vocatives are used as a common way of politely addressing an adult person. In examples like (111b) and especially (111c), on the other hand, the social rank of the addressee becomes more prominent: *mevrouw* and *meneer* are then used to express a difference in social status with the addressee being placed high(er) on the social scale. These examples feel somewhat old-fashioned. Note that the use of an article is not possible.

- (111) a. Kan ik u helpen, mevrouw/meneer?  
can I you help madam/sir  
‘Can I help you, ma’am/sir?’  
b. Wil (\*de) mevrouw/meneer misschien ook een kopje thee?  
wants the madam/sir perhaps also a cup [of] tea  
c. (\*De) mevrouw/meneer komt zo.  
the madam/sir comes straightaway

Kinship nouns like *grootmoeder* ‘grandmother’ in (112) can also be used in a way similar to the nouns in (109) and (111). As *mevrouw/meneer* in (111), these kinship nouns are never preceded by a definite determiner. Note that in all these examples the more intimate noun *oma*, which comes somewhat closer to a true vocative, would normally be used.

- (112) a. (\*De) grootmoeder/oma, kunt u even komen?  
           the grandmother/granny can you a while come  
           ‘Grandmother, could you come over for a minute?’  
       b. Wil (\*de) grootmoeder/oma misschien ook een kopje thee?  
           wants the grandmother/granny perhaps also a cup [of] tea  
           ‘Would you also like a cup of tea, grandmother?’  
       c. (\*De) grootmoeder/oma komt zo.  
           the grandmother/granny comes straightaway  
           ‘Grandmother will be with you straightaway.’

In a sense, kinship nouns can be much more freely used than the “profession” nouns in (109). In (109c), the speaker refers to a certain person by using the label the listener would normally use while addressing that person. Comparable examples containing bare kinship nouns like *vader/pappa*, on the other hand, are often several ways ambiguous, depending on the context. Like (109c), example (113) has a reading where *vader/pappa* is the “label” normally used by the listener (but not necessarily by the speaker himself) in addressing the person under discussion: this is the “your daddy” reading in (113i). In addition, it also has a reading in which the speaker uses the “label” *vader/pappa* to refer to himself, that is, (113ii) can be uttered by the addressee’s father himself. Finally, the sentence can be uttered by the person who normally uses the “label” *vader/pappa* to address the person under discussion: this is the “my daddy” reading in (113iii). In all three interpretations of (113) we are dealing with extended uses of bare vocatives.

- (113) Vader/Pappa komt zo.  
       father/daddy comes straightaway  
       i. ‘Your daddy will be with you straightaway.’  
       ii. ‘I, your daddy, will be with you straightaway.’  
       iii. ‘My daddy will be with you straightaway.’

Finally, consider the examples in (114). Since the bare noun phrases in (114) are “labels”, like *dokter* in (109b&c) or *vader* in (113), it does not seem unreasonable to bring up these examples under the general rubric of vocatives and vocative-like constructions. These bare noun phrases occur in PPs, nominal predicates and argument positions (like the subject).

- (114) a. Dit wordt besproken in (\*het) hoofdstuk vier.  
           this is discussed in the chapter four  
       a’. Dit is (\*het) hoofdstuk vier.  
           this is the chapter four  
       b. Dat staat op (\*de) bladzijde 597.  
           that stands on the page 597  
       b’. (\*De) bladzijde 597 ontbreekt.  
           the page 597 is.missing

The bare noun phrases in (114) alternate with the examples in (115) involving ordinal numerals. In these examples, the use of the definite determiner is obligatory since noun phrases containing ordinal numerals do not normally occur in the absence of a determiner.

- (115) a. Dit wordt besproken in \*(het) vierde hoofdstuk.  
           this is       discussed in   the   fourth chapter  
       b. Dat staat op \*(de) 597ste pagina.  
           that stands on   the 597<sup>th</sup> page

### 5.1.2.3. *Special cases*

Singular count nouns are normally not used in argument position without an article: see Section 8.2.2 for the use of bare singular count nouns used as predicates. There are, however, a number of cases in which bare singular count noun is acceptable.

#### 1. *N+V collocations*

The use of bare count nouns is possible in certain N+V collocations like *piano spelen* 'to play the piano' and *paard rijden* 'to ride on horseback'. Collocations like these behave like particle verbs such as *weggooien* 'to throw away'. First the examples in (116) show that both the bare count noun and the particle must be adjacent to the verb; scrambling leads to severe ungrammaticality.

- (116) a. Jan zal morgen piano spelen  
           Jan will tomorrow piano play  
           'Jan will play the piano tomorrow.'  
       a'. \*Jan zal piano morgen spelen.  
       b. Jan wil morgen paard rijden.  
           Jan wants tomorrow horse drive  
           'Jan wants to ride on horseback tomorrow.'  
       b'. \*Jan wil paard morgen rijden.  
       c. Jan zal dat boek morgen weggooien.  
           Jan will that book tomorrow throw.away  
           'Jan will throw away that book tomorrow.'  
       c'. \*Jan zal dat boek weg morgen gooien.

The N+C collocation yet cannot be considered a single word given that °verb-second can split the noun and the verb, just like it can split the verb and the particle.

- (117) a. Jan speelt morgen piano.  
           Jan plays tomorrow piano  
           'Jan is playing the piano tomorrow.'  
       b. Jan rijdt morgen paard.  
           Jan drive tomorrow horse  
           'Jan is riding on horseback tomorrow.'  
       c. Jan gooit het boek morgen weg.  
           Jan throws the book tomorrow away  
           'Jan throws the book away tomorrow.'

Topicalization of the verb, on the other hand, must pied pipe the bare count noun or the particle, as is illustrated in (118).

- (118) a. Piano spelen zal Jan morgen.  
           piano play   will Jan tomorrow  
       a'. \*Spelen zal Jan morgen piano.

- b. Paard rijden mag Jan morgen.  
horse drive is.allowed Jan tomorrow
- b'. \*Rijden mag Jan morgen paard.
- c. Weg gooien zal Jan dat boek morgen.  
away throw will Jan that book tomorrow
- c'. \*Gooien zal Jan dat boek morgen weg.

The examples above show that we are dealing with more or less idiomatic expressions, which are very common for all kinds of recurring activities (such as certain domestic duties). It seems that the formation of these collocations is only possible when there is no simple verb expressing the activity. For example, whereas the collocation *auto rijden* 'to drive a car' is possible the collocation *fiets rijden* is apparently blocked by the existence of the verb *fietsen* 'to cycle'. We will return to the N+V collocations discussed above in Section 5.1.5.2, sub I, where we will show there that there are reasons to assume that they are structurally ambiguous.

## II. Locational P + N collocations

There are also more or less fixed P + N collocations; two examples are given in (118). The expressions are more or less idiomatic in the sense that they are not entirely built up compositionally; as is shown by the English translations, the PP does not merely refer to a location. For a more extensive discussion of prepositions that take bare noun phrases as their complement, see Section P2.1.

- (119) a. Jan zit hier op school.  
Jan sits here on school  
'Jan is enrolled as a student in this school.'
- b. Jan zit hier al jaren op kantoor.  
Jan sits here already for years on office  
'Jan is already employed at this office for years.'

## III. Coordination

The examples in (120a&b) show that whereas a bare count noun like *mes* 'knife' cannot be used in argument position, the coordinated phrase *mes en vork* can. Again, it seems that we are dealing with more or less idiomatic constructions, as will be clear from the fact illustrated by (120c) that the relative position of the two conjuncts cannot be changed. Example (120d), finally, shows that there are extra-linguistic constraints on the conjuncts: the unacceptability of *mes and lepel* is clearly related to the Western convention that one uses a knife and a fork at dinner, not a knife and a spoon.

- (120) a. \*Jan gebruikte mes bij het avondeten  
Jan used knife with the dinner  
'Jan used knife at dinner.'
- b. Jan gebruikte mes en vork bij het avondeten  
Jan used knife and fork with the dinner
- c. \*Jan gebruikte vork en mes bij het avondeten  
Jan used fork and knife with the dinner
- d. \*Jan gebruikte mes en lepel bij het avondeten  
Jan used knife and spoon with the dinner

There are many examples of coordinated bare singular count nouns. In (121) some typical examples are given involving kinship nouns: we may add *vader en moeder* ‘father and mother’ although we may be dealing with vocatives in this case. All of these cases seem idiomatic in the sense that the order of the conjuncts is rigid and sometimes the meanings are not compositional: *man en vrouw* refers to a couple, and *moeder en kind* typically refers to a mother and her newborn baby.

- |          |                       |                      |
|----------|-----------------------|----------------------|
| (121) a. | man en vrouw          | a'. *vrouw en man    |
|          | man and woman         |                      |
|          | ‘husband and wife’    |                      |
| b.       | broer en zuster       | b'. *zuster en broer |
|          | brother and sister    |                      |
| c.       | moeder en kind        | c'. *kind en moeder  |
|          | mother and child      |                      |
|          | ‘mother and her baby’ |                      |

Other examples involve nouns referring to objects that are typically used together. A typical example is *mes and vork* ‘knife and fork’ from example (120), but there are many more: a small and random set is given in (122).

- |          |                   |                  |
|----------|-------------------|------------------|
| (122) a. | draad en naald    | c. pen en papier |
|          | thread and needle | pen and paper    |
| b.       | huis en tuin      | d. pijl en boog  |
|          | house and garden  | arrow and bow    |

Another clearly idiomatic example is *dag en nacht* ‘day and night’ in (123), which is rather special in that it is used, not as an argument, but as an adverbial phrase meaning something like “continuously for a very long time”.

- (123)     Hij hilde dag en nacht.  
               he cried    day and night

Note that the conjunction need not be *en* ‘and’ but can also be *noch* ‘neither ..nor’. It is clear from the meaning that we are dealing with fixed expressions in (124). We have not been able to find examples with the disjunctive coordinator *of* ‘or’, which do occur in English: cf. *It is feast or famine these days for a working fisherman* (Carole Boster, p.c.).

- (124) a.     Hij heeft kind noch kraai.  
               he    has    child nor crow  
               ‘He has no family at all.’  
       b.     Hij geeft taal        noch teken.  
               he    gives language nor    sign  
               ‘There is no sign of life from him.’

Using coordinated bare count nouns in prepositional adverbial phrases is very common, as shown by the examples in (125). Note that all these constructions often have a “high degree” reading; see Postma (1995) for discussion.

- (125) a. Het schip verging met man en muis.  
the ship was wrecked with man and mouse  
'The ship was lost with everyone on it.'
- b. Hij verzette zich met man en macht.  
he resisted REFL with man and power  
'He resisted with all his might.'
- c. Hij ging van deur tot deur.  
he went from door to door  
'He went to all places.'

Again the disjunctive coordinator *of* 'or' is normally not found, although it must be noted that the fixed collocation *op leven en dood* in, e.g., *op leven en dood vechten* 'to fight a life-and-death battle' is sometimes realized with *of*; a Google search performed on August 25, 2009, resulted in 674 hits for the string [*op leven of dood*] (but more than 50.000 hits for [*op leven en dood*]).

Finally, note that none of the examples above involve conjuncts containing a modifier. This is not accidental: adding a modifier to any of the bare nouns above will give rise to an ungrammatical result.

#### IV. Conclusion

The previous subsections have shown that bare singular count noun may occasionally occur in argument position, but that this always triggers some special meaning aspect; see De Swart & Zwarts (2001) for more discussion. We therefore conclude that we are normally dealing with more or less idiomatic constructions; see Zwarts (2008) for a potential counterexample to this claim.

##### 5.1.3. Definite articles with acronyms and abbreviations

Definite articles are not normally construed with proper nouns, unless they are part of the name as such (cf. Section 5.1.2.1, (83)), which especially holds for names of companies and organizations. Some examples of this sort are given in (126). The difference between (126c) and (126d) serves the purpose of showing that the presence of the definite article is largely idiosyncratic. In many cases, proper nouns of this sort have acronyms. The primed examples show that the definite article is generally retained when an acronym is used instead of the full name. Example (126d') further shows that the acronyms of names that do not contain an article also lack an article.

- |          |                                        |               |
|----------|----------------------------------------|---------------|
| (126) a. | de Nederlandse Spoorwegen              | a'. de NS     |
|          | the Dutch Railways                     |               |
| b.       | de Verenigde Staten (van Amerika)      | b'. de VS     |
|          | the United States of America           |               |
| c.       | de Centrumdemocraten                   | c'. de CD     |
|          | the Center Democrats (political party) |               |
| d.       | (?de) Democraten '66                   | d'. (*de) D66 |
|          | Democrats '66 (political party)        |               |



In (126), we selected plural names for the reason that the full nouns and the acronyms may differ in the number agreement they trigger on the finite verb of a clause. Consider first the examples in (127). Here we see that abbreviations of a formal plural can, and typically do, externally behave like a singular. Example (127b) shows that *de NS* can trigger either singular or plural agreement on the finite verb, where the former is the more colloquial form and the latter the more formal form. Note that the company itself prefers to use the acronym without the article, in which case plural agreement is no longer possible: a typical example taken from the website of NS is given in (127c).

- (127) a. De Nederlandse Spoorwegen maken weer winst.  
           the Dutch Railways<sub>pl</sub>           make<sub>pl</sub> again profit  
           'Dutch Railways are turning a profit again.'
- b. De NS maakt/maken weer winst.  
           the NS makes/make   again profit
- c. NS staat/\*staan in de Top 3 van de best op tijd rijdende  
           NS stands/stand in the top 3 of the best on time driving  
           spoorwegbedrijven in Europa.  
           railway.companies in Europe  
           'NS is in the top 3 of most punctual railway companies in Europe.'

With the acronym of *de Verenigde Staten* in (128b) singular and plural agreement alternate as well, unlike in American English, where the noun phrase *the US* normally triggers singular agreement (Carole Boster, p.c.). Article drop is not possible in (128b), which suggests that article drop is confined to companies, but establishing this requires more research. For completeness' sake, note that although it is sometimes claimed that the full form *de Verenigde Staten* in (128a) always triggers plural agreement ([www.onzetaal.nl/advies/vs.php](http://www.onzetaal.nl/advies/vs.php)), it is easy to find examples on the internet in which it functions as a singular noun phrase, as is also common in American English.

- (128) a. De Verenigde Staten hebben/\*heeft tegen de resolutie gestemd.  
           the United States<sub>pl</sub>   have/has       against the resolution voted  
           'The United States voted against the resolution.'
- b. De VS heeft/hebben tegen de resolutie gestemd.  
           the US has/have       against the resolution voted

While (127) and (128) are evidence that abbreviations of formal plurals can outwardly behave like plurals, the examples in (129) show that this is not always the case. Though both *CD* and *D66* correspond to formal plurals (both featuring the plural noun *Democraten* as their head), plural agreement with *de CD* is very awkward. Plural agreement with *D66* is entirely out of the question. The latter seems to be linked to the fact that *D66* obligatorily occurs without an article; cf. the fact that article-less *NS* in (127c) also triggers singular agreement.

- (129) a. De Centrumdemocraten \*heeft/hebben tegen gestemd.  
           the Center Democrats   has/have       against voted
- a'. De CD heeft/\*hebben tegen gestemd.

- b. Democraten '66 heeft/<sup>??</sup>hebben tegen gestemd.  
 Democrats '66 has/have against voted  
 b'. D66 heeft/\*hebben tegen gestemd.

Acronyms exhibit special behavior not only with respect to number agreement, but also with respect to gender. The examples in (130) are representative cases of acronyms whose full form is headed by the non-neuter singular *onderzoekschool*. We see, however, that the acronym LOT is preferably construed with the neuter article *het*. One may speculate that this is due to interference from the fact that the lexical item *lot* 'fate/lottery ticket' is also a neuter noun, but this cannot be the whole story given that the neuter article is also used with the acronym FNV in (130b') for which no corresponding lexical item can be found.

- (130) a. De/\*Het Landelijke Onderzoekschool Taalkunde zetelt in Utrecht.  
 the National Research-school Linguistics is.seated in Utrecht  
 'The National Graduate School in Linguistics has its seat in Utrecht.'  
 a'. Het<sup>%</sup>De LOT zetelt in Utrecht.  
 the<sub>[-neuter]/[+neuter]</sub> LOT is.seated in Utrecht  
 b. de/\*het Federatie Nederlandse Vakbeweging  
 the Federation Dutch trade.union  
 b'. de/het FNV

In many cases, acronyms start to behave like proper nouns themselves in the sense that the public is no longer familiar with the original name the acronym stands for. A good example is the ASN bank: the acronym ASN stands for *Algemene Spaarbank Nederland* (literally: General Savings Bank of the Netherlands) but apparently the acronym has become so opaque that the company felt it necessary to add the noun *bank* to the acronym. It should be clear by now that once acronyms get to this stage they may start to exhibit all kinds of unexpected behavior.

#### 5.1.4. Deviant semantics

This section will discuss a number of special semantic readings of noun phrases with a definite or indefinite (null) article. We will not try to relate these special cases to any of the semantic core interpretations of the articles discussed in Section 5.1.1. Section 5.1.4.1 starts with a number of cases in which the verb and the noun phrase form some sort of complex verbal predicate. Section 5.1.4.2 continues with the use of articles in evaluative contexts, such as the use of *een* in exclamative constructions, and Section 5.1.4.3 discusses the use of articles with certain measure phrases. Section 5.1.4.4 concludes with a discussion of the use of the definite article in inalienable possession constructions.

##### 5.1.4.1. Complex verbal predicates

This section discusses a number of cases involving more or less fixed combinations of noun phrases and verbs, which often come close to forming complex verbal predicates.

*I. Een boek lezen 'to read a book'*

Section 5.1.1.3 has shown that an indefinite noun phrase like *een boek* 'a book' in (131a) can have at least two interpretations: it can be nonspecific, in which case it refers to some book unknown to the speaker and the addressee, or it can be specific, in which case it refers to a book known to the speaker but not to the addressee. There is, however, a third, non-referential reading of this example, which expresses that the speaker wants to be engaged in a "book-reading event". On this reading, the interpretation of the example comes very close that of a sentence like (131b) where the direct object is not expressed: in other words, on the reading in question *een boek lezen* 'to read a book' comes very close to acting like a complex verbal predicate.

- (131) a. Ik wil vanavond een boek lezen.  
           I want tonight a book read  
           'I want to read a book tonight.'  
       b. Ik wil vanavond lezen.

It seems that the direct object must be sufficiently "general" in order for it to be construed as part of a "complex" verbal predicate. The examples in (132), for instance, do not readily allow the intended non-referential readings; the direct object must be construed either specifically or non-specifically.

- (132) a. #Ik wil vanavond een roman lezen.  
           I want tonight a book read  
       b. #Ik wil vanavond een gedicht lezen.  
           I want tonight a poem read  
       c. #Ik wil vanavond een krant lezen.  
           I want tonight a newspaper read

*II. De krant lezen 'to read the paper'*

The examples in (133) show that definite noun phrases can also be construed as being part of a complex verbal predicate. Example (133a), for example, normally does not imply that the speaker has a certain movie or cinema in mind, but that he wants to see some movie in some cinema. Similarly, (133b) does not focus on a certain newspaper: when the reader has a subscription to three newspapers he may intend to read all three issues of that day, and perhaps also some issues of the previous days.

- (133) a. Ik ga vanavond naar de film/bioscoop.  
           I go tonight to the movie/cinema  
       b. Ik wil een uurtje de krant lezen.  
           I want an hour the newspaper read  
           'I want to read the newspaper for an hour.'

In these cases, we are also dealing with more or less fixed combinations. This will become clear from the constructions in (134), where we compare the acceptability judgments on noun phrases taken from more or less the same semantic domain ("art" in a broad sense). In (134), we see that noun phrases like *het toneel* 'the play/theater' and *het concert* 'the concert' cannot be used in constructions like (133a).

- (134) Ik ga vanavond naar  $\left[ \begin{array}{l} \text{de film / bioscoop} \\ \text{het theater / *toneel} \\ \text{de opera} \\ \text{*het concert} \end{array} \right]$ .
- I go tonight to  $\left[ \begin{array}{l} \text{the movie / cinema} \\ \text{the theater / play} \\ \text{the opera} \\ \text{the concert} \end{array} \right]$

Something similar can be observed from the examples in (135), which are quite common ways of expressing that one wants to make a career in the world of the movies, theater, etc, but it is not the case that there is a form for all artistic careers. For example, whereas it is possible to use *Ik wil bij de opera* to express that one aspires a job as an opera singer, one cannot express that one wants to become a member of an orchestra by saying *Ik wil bij het orkest*; this example can only be used with a referential reading of the noun phrase “I want to join the orchestra”,

- (135) Ik wil bij  $\left[ \begin{array}{l} \text{de film / *bioscoop} \\ \text{het theater / toneel} \\ \text{de opera} \\ \text{*het concert} \end{array} \right]$ .
- I want with  $\left[ \begin{array}{l} \text{the movie / cinema} \\ \text{the theater / play} \\ \text{the opera} \\ \text{the concert} \end{array} \right]$

In order to express that one wants to make a career as a musician (e.g., as a member of an orchestra), one would instead use the construction in (136a). This construction is a very restricted, idiomatic construction that does not allow any of the other definite noun phrases; (136b) is only acceptable under a literal meaning where *het theater* and, more marginally, *de opera* refer to buildings where performances take place (an option lacking for *de film*).

- (136) a. Hij wil de muziek in.  
he wants the music into  
'He wants to make a career in music.'
- b. Ik wil \*de film/<sup>#</sup>het theater/<sup>#</sup>de opera in.

Note that example (136a) involves a postpositional and, hence, directional PP. When we want to express that someone is a professional musician, the postpositional PP would be replaced by a prepositional (locational) one, as in (137a). The (b)-examples show that this construction does not allow any of the other definite noun phrases either: only the literal meanings are available.

- (137) a. Hij zit in de muziek.  
he sits in the music  
'He is a professional musician.'
- b. <sup>#</sup>Hij zit in de film/het theater/de opera.

(138) a. Jan maakt een buiging voor de koning. a'. Jan buigt voor de koning  
 Jan makes a bow for the king Jan bows for the king  
 b. Jan geeft Peter een kus. b'. Jan kust Peter.  
 Jan gives Peter a kiss Jan kisses Peter  
 c. Ik geef Jan een schop onder z'n kont. c'. Ik schop Jan onder z'n kont.  
 I give Jan a kick under his ass I kick Jan under his ass

Plural indefinite noun phrases can also be used in these light verb constructions. In that case, it is expressed that the action denoted by the complex predicate is performed several times. This is clearest when the indefinite noun phrase is modified by means of a numeral; example (139a) can be paraphrased by means of (139b). Note that due to the durative meaning of verb *buigen*, the repetitive meaning can also be present when the adverbial phrases are not used.

- (139) a. Jan maakt (verscheidene/drie) buigingen voor de koning.  
 Jan makes several three bows for the king  
 b. Jan buigt (verschillende malen/drie keer) voor de koning.  
 Jan bows several times/three times for the king

The presence of restrictive modifiers, as in the primed examples in (140), often seem to favor a referential interpretation of the noun phrase, although it must be noted that these adjectives can often also be used as manner adverbs modifying the event. This is illustrated by the primed examples.

- (140) a. Jan maakte een elegante buiging voor de koning.  
 Jan made an elegant bow for the king  
 a'. Jan boog elegant voor de koning.  
 Jan bowed elegantly for the king  
 b. Jan gaf Peter een adembenemende kus.  
 Jan gave Peter a breathtaking kiss  
 b'. ?Jan kuste Peter adembenemend.  
 Jan kissed Peter breathtakingly

- c. Ik gaf Jan een harde schop onder zijn kont.  
I gave Jan a hard kick under his ass
- c'. Ik schopte Jan hard onder z'n kont.  
I kicked Jan hard under his ass

Occasionally, we also come across light verb constructions with definite objects. The examples in (141) show that the verb *doen* 'to do' is very productive in forming such complex verbal predicates, especially for denominating regular domestic activities. Some of these combinations are developing in the direction of idioms: although the noun phrase *de vaat* 'the washing' is no longer commonly used in normal argument positions in the Western part of the Netherlands, the complex verbal expression in (141c) is still quite common.

- (141) a. Ik doe de ramen morgen.  
I do the windows tomorrow  
'I wash the windows tomorrow.'
- b. Ik doe de afwas/was.  
I do the dishes/washing
- c. Jan doet de vaat.  
Jan does the dishes

#### IV. Idioms

Example (141c) naturally leads to a discussion of noun phrases in idiomatic expressions. In (142) we give some examples involving an indefinite, and in (143) some examples involving a definite article. There is no sense in which the articles in these examples evoke a referential reading; the (in)definite noun phrases are simply part of idiomatic clusters of verb plus (prepositional) object. Some of the nouns also occur as referential nouns in (present-day) Dutch with the meaning given in the glosses; those nouns repeated in small caps in the glosses do not.

- (142) a. het op een lopen zetten      c. iemand een poets bakken  
it on a run<sub>infinitive</sub> put      somebody a POETS bake  
'to start running away'      'to play a trick on somebody'
- b. iemand een loer draaien      d. Ø spoken zien  
somebody a LOER turn      Ø ghosts see  
'to deceive somebody'      'to be mistaken'
- (143) a. op de tocht staan  
on the draught stand  
'to be in a draughty spot'
- b. in de clinch liggen met iemand  
in the CLINCH lie with somebody  
'to quarrel with somebody'
- c. iets onder de loep nemen  
something under the magnifying glass take  
'to investigate something'

- d. iets            op de korrel   nemen  
something on the pellet   take  
'to criticize something'
- e. ergens        de balen    van hebben  
something the BALEN of   have  
'to be fed up with something'
- f. iets/iemand    aan de praat   krijgen  
someone/thing on the talk   get  
'to get someone to talk/something to work'

*V. Noun phrases denoting a mental/physical condition*

When we restrict ourselves to the syntactic frame [<sub>NP</sub> heeft/krijgt \_\_\_] in (144), we can observe that disease denoting nouns come in three groups: the first group in (144a) requires the presence of a definite article; the second group in (144b) optionally combines with a definite article; the third group in (144c) cannot combine with an article. The fact that none of the noun phrases in (144) are interpreted specifically suggests that the article *de* is semantically vacuous in constructions of this type.

- (144) a. Jan heeft/krijgt \*(de) pest/bof/tering  
          Jan has/gets        the pestilence/mumps/consumption
- b. Jan heeft/krijgt (de) griep/mazelen/pokken.  
          Jan has/gets        the flu/measles/smallpox
- c. Jan heeft/krijgt (\*de) kanker/aids/tuberculose.  
          Jan has/gets        the cancer/AIDS/tuberculosis

Some names of diseases can also be used in figurative speech, as part of the idiomatic register. This is illustrated in (145) for the noun *pest* 'pestilence/plague': both examples refer to a mental state of the speaker. Note that, just as in (144a), the definite article is obligatory in these examples, despite the fact that it does not seem to make any semantic contribution.

- (145) a. Ik heb/krijg (er) de pest    in.  
          I have/get there the plague in  
          'I am very annoyed.'
- b. Ik heb/krijg de pest        aan die vent!  
          I have        the plague on that guy  
          'I can't stand that guy!'

Names of diseases are also common in curses. An interesting feature of this use is that the disease denoting noun is always preceded by the definite article, regardless of the category of nouns it belongs to. In (146), we have shown this for each of the three types in (144).

- (146) Krijg \*(de) pest/kanker/pokken!  
          get    the pestilence/cancer/smallpox  
          'Go to hell!'

# VI. Noun phrases denoting means of transportation and communication

Definite noun phrases are not necessarily interpreted specifically or generically in examples of the type in (147a): such examples are ambiguous and can mean either that the speaker takes a specific bus (for instance, the one that is coming around the corner just now), or that he takes the bus *qua* means of transportation (*any* bus). In many cases, such as (147b&c), the latter reading is clearly the favored one.

- (147) a. Ik neem de bus.  
           I take the bus  
           ‘I will take a specific bus’ or ‘I will go by bus.’  
       b. Ik doe alles met de bus.  
           I do everything with the bus  
           ‘I only travel by bus.’  
       c. Ik heb een hekel aan de bus.  
           I have a dislike for the bus  
           ‘I hate travelling by bus.’

On the second reading in (147a), *de bus* ‘the bus’ is not a referential noun phrase, but interpreted as a subpart of the idiomatic verbal predicate *de bus nemen* ‘take the bus, that is, engage oneself in bus-riding’. Non-referential interpretations of this type are available for noun phrases with definite determiners with a variety of “means of transportation” as their head. To give an impression of the range of possibilities, some acceptable examples are given in (148a-c).

- (148) a. Ik neem de bus/trein/tram/metro.      c. Ik neem de auto/fiets.  
           I take the bus/train/“tram”/subway      I take the car/bike  
       b. Ik neem het vliegtuig/de boot.      d. Ik neem een/? de taxi.  
           I take the airplane/the boat      I take a/the taxi

Note that the noun *taxi* in (148d) is special in that it requires an indefinite article. The fact that we apparently cannot predict which article will be used may simply be a reflex of the idiomatic character of this construction with the verb *nemen* (and its more colloquial near-equivalent *pakken* ‘take, fetch, catch’). That we are dealing with idioms may be supported by the fact that there are clear idiomatic cases involving this verb, which are given in (149b). Although (149a) seems a direct instantiation of the general pattern in (148), this example is also special given that the noun *benenwagen* can only be used in “means of transportation” contexts.

- (149) a. Ik neem de benenwagen.      b. Ik neem de benen.  
           I take the leg-car      I take the legs  
           ‘I go on foot.’      ‘I am running away.’

The examples in (150) show that the non-referential “means of transportation” interpretation of noun phrases with a definite article is also found in (complement-)PPs in clauses featuring motion and positional verbs.



- (150) a. Ik ga wel met de bus/trein/fiets/auto/taxi/benenwagen.  
           I go PRT with the bus/train/bike/car/taxi/leg-car  
       b. Ik stap wel op de bus/trein/boot.  
           I step PRT on the bus/train/boat  
       c. Ik spring voor de trein.  
           I jump before the train  
       d. Ik zit vaak in de trein.  
           I sit often in the train

The PP in (150a), which features a non-referential definite noun phrase, sometimes alternates with a *per*-PP, featuring the Latinate preposition *per*, which systematically takes determiner-less complement noun phrases. The fact that some of the cases in (150a) alternate with determiner-less (151) supports the claim that the definite article *de* in (150a) has no indispensable semantic contribution to make.

- (151) Ik ga wel per Ø bus/trein/?fiets/?auto/taxi/\*benenwagen.  
           I go PRT by bus/train/bike/car/taxi/leg-car  
           ‘I will go by bus/train/...’

Just like noun phrases denoting a means of transportation, noun phrases denoting a means of communication may contain a definite article that does not necessarily contribute the notion of definiteness. This is very clear in (152b) where the article *de* can be dropped without a noticeable change in meaning.

- (152) a. Pak de telefoon en vertel het hem!  
           take the telephone and tell it him  
           ‘Phone him up and tell him!’  
       b. Ik zag het op (de) televisie.  
           I saw it on the television  
           ‘I saw it on television.’  
       c. Ik hoorde het op \*(de) radio.  
           I heard it on the radio  
           ‘I heard it on the radio.’

#### 5.1.4.2. Articles in evaluative contexts

This section discusses several cases in which the use of an indefinite or a definite article leads to what we may call a subjective/evaluative interpretation, revealing the speaker’s subjective evaluation of some aspect of his utterance; see Section 8.2.2 for a similar effect in the domain of nominal predicates. This holds especially for the indefinite article *een* in exclamative contexts and for stressed definite articles.

##### 1. The spurious indefinite article *een*

The examples in (153) and (154) illustrate the evaluative use of *een* in exclamative constructions, which inherently express some evaluation on the part of the speaker, which may be either positive or negative (depending on contextual or extra-linguistic factors). We are dealing with a spurious indefinite article *een* in these examples, which is clear from the fact, illustrated by the (b)-examples, that it can be used in combination with plurals.

- (153) • Exclamative *wat een N!*  
 a. Wat \*(een) boek is dat!  
     what a book       is that  
 b. Wat \*(een) boeken zijn dat!  
     what a books       are that
- (154) • Exclamative *een N!*  
 a. Dat is me toch \*(een) boek!  
     that is me PRT a book  
 b. Dat zijn me toch (een) boeken!  
     that are me PRT a books

When the article is followed by a singular count noun, the evaluation must involve some property of the book, which may be related to its contents, its physical properties, its appearance, etc. The same thing holds when the noun is plural, but in this case the evaluation may also involve the number of books.

- (155) Een boeken dat hij heeft!  
         a books       that he has  
         ‘He’s got an enormous amount of books!’

Perhaps the interrogative *wat voor* constructions in (156) can be brought under the same rubric of “evaluativity”, since the speaker is asking the listener for a further characterization of the set denoted by the NP in question. This further characterization can (but need not) be expressed by means of an evaluative attributive adjective: a prototypical answer to (156a) would be *een interessant/saai boek* ‘an interesting/boring book’.

- (156) • Interrogative *wat voor een N?*  
 a. Wat voor (een) boek is dat?  
     what for a book       is that  
 b. Wat voor (een) boeken zijn dat?  
     what for a books       are that

One might wish to also include the *N of a N* construction in (157), where the evaluative part should be found in the metaphorical comparison inherently expressed by this construction. Note, however, that Section 4.2.1, sub VI, has claimed that for many speakers the use of *een* in the plural example (157b) leads to a highly marked result.

- (157) • *N of a N*  
 a. een schat van \*(een) kind  
     a darling of a child  
 b. schatten van (<sup>%</sup>een) kinderen  
     darlings of a children

## II. Stressed definite articles: “*Par excellence*”

This subsection discusses a special use of the definite articles, which is illustrated in (158). This use is easily recognizable by the heavy accent assigned to the article, which is marked in writing by means of an acute accent on the vowel symbol. Note

in passing that stressed *dé* is the only case in Dutch in which a function word with a nucleus schwa receives heavy accent; the article *hèt* is not pronounced with a schwa but as /het/.

- (158) a. Dit is dé bank van Nederland.  
           this is the bank of the.Netherlands  
       b. Dit is hèt adres voor al uw inkopen.  
           this is the address for all your purchases

The semantics contributed by the definite article in these examples can best be characterized as *par excellence*; the noun phrase in question refers not just to a specific entity or group of entities, but asserts the referent is the representative *par excellence* of the total set denoted by the NP embedded under the determiner.

There is a tendency for definite noun phrases with an emphatically stressed article to function as nominal predicates, as in (158) and the primeless examples in (159), but it is not impossible for them to perform argument functions, as shown by the primed examples.

- (159) a. Dit is hèt concert van het jaar.  
           this is the concert of the year  
       a'. Hèt concert van het jaar vond plaats op 13 juli.  
           the concert of the year found place on 13 July  
       b. Dit is dé manier om PRO het te doen.  
           this is the way COMP it to do  
           'This is the way to do it.'  
       b'. Ik heb dé manier om PRO het te doen ontdekt.  
           I have the way COMP it to do discovered  
           'I have discovered the way to do it.'

This emphatic use of the definite article is possible not only with common nouns, but also with proper nouns. An example is given in (160). The reaction on the contention of the first participant in the discourse expresses disbelief/surprise on the part of the second participant, who is asking whether the first participant really refers to the world-famous lead singer of the Rolling Stones.

- (160) Ik heb Mick Jagger gisteren gezien. — Wat!? Toch niet dé Mick Jagger?  
       I have Mick Jagger yesterday seen.     What PRT not the Mick Jagger  
       'I saw Mick Jagger yesterday. — *What!?* Not *the* Mick Jagger?'

The emphatic use of the definite article is not compatible with a generic interpretation of the noun phrase: since generic noun phrases like *de zebra* 'the zebra' in (161) do not pick out individuals or groups of individuals from out of a larger set, they cannot pick out the representative(s) *par excellence* of this set either. Hence (161b) is ungrammatical, in contrast to (161a), which features unstressed *de*.

- (161) a. De zebra is gestreept.  
           the zebra is striped  
       b. \*Dé zebra is gestreept.  
           the zebra is striped

Haeseryn et al. (1997) claims that the *par excellence* reading can also be obtained by using the stressed second person singular possessive pronoun *jé*, as in (162). These examples with *jé* are, however, not as common nor as widely accepted as the ones with *dé/hèt*. Note that it is very remarkable that the weak form *je* (with a schwa as nucleus) can receive accent without switching to the strong form *jouw*, which never allows a *par excellence* interpretation.

- (162) a. %Dat is dé/%jé/#jòuw auto.  
           that is the/your/your car  
       b. Dat is hèt/%jé/#jòuw adres voor Franse kaas.  
           that is the/your/your address for French cheese

Although not all speakers accept the *par excellence* reading of stressed *jé*, they do all accept the weak possessive pronoun *je* (as well as the weak article *het*) on a similar *par excellence* reading in the idiomatic expression in (163); assigning stress to *je* will result in ungrammaticality (although stress can be assigned to *het*). Note that *je/het ware* probably involves an elided noun; similar, non-elided constructions are possible with the nouns *leven* ‘life’ and *geluk* ‘happiness’.

- (163) Dat is je/het ware!  
           that is your/the true-INF  
           ‘That’s the real thing, that’s great/the best.’

To conclude, it may be interesting to note that the stressed form *jé* can also be combined with the definite article *het* into the highly idiomatic construction in (164), which shares with the earlier examples the *par excellence* reading. Note that we have glossed stressed *hèt* as “the” rather than as the pronoun “it”. The reason for doing this is that *hét* in (164) contravenes two otherwise robust properties of pronominal *het*: its failure to receive accent and its non-occurrence to the right of prepositions. See the discussion of R-pronominalization in Section P5.1: *\*Ik kijk naar het* vs. *Ik kijk ernaar* ‘I look at it’.

- (164) Dat is jé van hèt.  
           that is you(r) of the  
           ‘That’s the best.’

#### 5.1.4.3. The definite article in measure phrases

In the following subsection we will enumerate a number of other ways in which the definite articles in particular can be used, along with a concise discussion of the semantic properties of these uses. The unifying feature of these uses is that they involve some kind of unit of measure. Semantically, they are rather diverse, however, and we will not attempt to provide a unifying syntactic and semantic analysis for them.

##### *I. Definite articles followed by a measure unit*

This section will discuss definite articles followed by a noun phrase denoting a measure unit. We start with cases where the article has a function similar to that of the preposition *per* borrowed from Latin. This is followed by temporal noun phrases preceded by the preposition *om*.

A. *Distributive de/het “per”*

Example (165) illustrates a special use of the definite article in front of a measure phrase, in which use it alternates with the Latinate preposition *per*, which always takes bare singular complements; cf. (151). We cannot conclude from this, however, that *de* and *het* function as prepositions given that they agree in gender with the noun following them, which is a property of articles, not of prepositions. The semantic contribution of the article *de/het* and the preposition *per* is distributive in the sense that it distributes the monetary unit *een euro* over a measure unit like *liter*.

- (165) a. De benzine kost een euro per/de liter.  
           the petrol costs a euro per/the liter  
           ‘Petrol costs a euro per liter.’  
       b. Die meloenen kosten een euro per/het stuk.  
           those melons cost a euro per/the piece  
           ‘Those melons cost a euro apiece.’

The distributive article can also mediate between a monetary unit and an individual who has to pay the relevant amount of money, as in the (166a). In this context, only *man* ‘person’ seems felicitous; substituting *vrouw* ‘woman’ for *man* gives rise to an unacceptable result, and the same thing holds for the replacement of *man* by *persoon* ‘person’ or *kind* ‘child’. The awkwardness of *de* in (166b) matches that of the corresponding example with the preposition *per*, but the deviance of (166c&d) cannot be dismissed on the same grounds, since the corresponding examples with *per* are perfectly acceptable.

- (166) a. De kaartjes kosten een euro per/de man.  
           the tickets cost a euro per/the man  
       b. \*De kaartjes kosten een euro per/de vrouw.  
           the tickets cost a euro per/the woman  
       c. De kaartjes kosten een euro per/\*de persoon.  
           the tickets cost a euro per/the person  
       d. De kaartjes kosten een euro per/\*het kind.  
           he tickets cost a euro per/the child

The fact that the phrase headed by the measure noun *euro* and the distributive phrase can be placed simultaneously in clause initial position shows that they form a constituent (the <sup>o</sup>constituency test). This is further supported by the primed and doubly-primed examples in (167), which show that splitting the two gives rise to at least a marked result.

- (167) a. [Een euro de liter] kost de benzine.  
           a euro the liter costs the petrol  
       a’. \*Een euro kost de benzine de liter.  
       a’’. <sup>?</sup>De liter kost de benzine een euro.  
       b. [Een euro de man] kosten die kaartjes.  
           a euro the man cost those tickets  
       b’. \*Een euro kosten die kaartjes de man.  
       b’’. <sup>?</sup>De man kosten die kaartjes een euro.

Still, the relative acceptability of (167b'') may suggest that, in some cases, topicalization of the distributive phrase is at least marginally possible. At first sight, this suggestion seems to receive additional support from a construction like (168b), which is fully acceptable. It may be the case, however, that (168b) is not syntactically related to (168a); the phrase *de man* may simply act as an independent °VP adverb, comparable to distributive elements like *allen* 'all' or *allemaal* 'all' in (168b'). Since we do not have conclusive arguments in favor of one of the options, we leave this issue for future research.

- (168) a. We moeten een euro de man betalen.  
           we must a euro the man pay  
       b. We moeten de man een euro betalen.  
           we must the man a euro pay  
       b'. We moeten allemaal/allen een euro betalen.  
           we must all/all a euro pay

*B. Definite articles followed by nouns denoting time intervals*

Haeseryn et al. (1997: 191-2) point out that the meaning contributed by a definite article preceding nouns denoting measurement units is not always crystal-clear, and may vary from case to case. Thus, the PP *om de minuut* in (169a) is interpreted as meaning "every minute" while the structurally identical PP *om de week* in (169b) is usually understood to mean "every other week"; given that some speakers also allow the "every week" reading, this may lead to misunderstandings, which can be solved by adding the adjective *andere* 'other', as in (169b').

- (169) a. Om de minuut flitst er een lampje aan.  
           around the minute flashes there a lamp<sub>dim</sub> on  
           'Every minute there's a lamp switching on.'  
       b. Om de week reist ze naar Genève.  
           around the week travels she to Geneva  
           'Every other week/<sup>%</sup>every week she travels to Geneva.'  
       b'. Om de andere week reist ze naar Genève.  
           around the other week travels she to Geneva  
           'Every other week/\*every week she travels to Geneva.'

The fact that *andere* can be added in (169b) suggests that *om de week* itself does not explicitly mean "every other week"; if it did, adding *andere* would be tautologous, as in fact it is in (170a), where the result of inserting *andere* is very awkward due to the fact that the *om het jaar* already unambiguously expresses that we are dealing with a biennial event. It remains an open question what feature of the lexical semantics of the noun is responsible for this surprising interpretative variation of the PP *om de N*. As a tendency it seems to be the case that the longer the stretch of time denoted by the noun, the more favored the "every other N" reading is: nouns like *seconde* 'second' and *minuut* 'minute' clearly favor the "every N" reading, whereas nouns like *maand* 'month' and *jaar* 'year' favor the "every other N" reading. It must be noted, however, that modifiers like *half* or numerals like *twee* 'two' in (170b) may override this tendency; the presence of such modifiers always results in an "every half/two N" reading.

- (170) a. De conferentie wordt om het (??andere) jaar gehouden.  
 the conference is around the other year held  
 'The conference is organized every other year.'
- b. De vergadering wordt om de twee maanden/het half jaar gehouden.  
 the meeting is around the two months/the half year held  
 'The meeting takes place every two months/half year.'

## II. Definite and indefinite articles construed with numerals

The previous subsection has shown that definite articles exhibit peculiar behavior in the domain of measure phrases. The uses of definite and indefinite articles described in the present subsection have a natural link with the preceding in that they, too, involve measure phrases, namely noun phrases containing numerals.

### A. Preposition + definite article *de* + NUMERAL

This subsection discusses phrases like *in/tegen de duizend boeken* in (171), which consist of a preposition followed by a plural noun phrase containing the definite article *de* and a numeral. Phrases like these are spurious PPs: they have the distribution of a noun phrase, which is clear from the fact illustrated in the primed examples that they cannot extrapose; see also the discussion of (174) below.

- (171) a. dat hij in de duizend boeken heeft.  
 that he into the thousand books has  
 'that he has more than a thousand books.'
- a'. \*dat hij heeft in de duizend boeken.
- b. dat hij tegen de duizend boeken heeft.  
 that he against the thousand books has  
 'that he has almost a thousand books.'
- b'. \*dat hij heeft tegen de duizend boeken.

The use of the definite article *de* in examples like (171) is special because no definite meaning aspect seems to be contributed by the determiner: the paraphrases in (172) make clear that the phrases are semantically indefinite.

- (172) a. dat hij ruim duizend boeken heeft.  
 that he over thousand books has  
 'that he has over a thousand books.'
- b. dat hij bijna duizend boeken heeft.  
 that he nearly thousand books has  
 'that he has nearly a thousand books.'

In fact, the indefiniteness of the phrases in (171) can readily be established without appealing to the paraphrases in (172). First, the "have" sentences in (171) seem to favor a permanent possession/ownership reading, and these do not allow definite direct objects. This is shown in (173): since birthmarks are permanently possessed, the use of the definite determiner leads to a semantically weird result in (173a). Similarly, (173b) is weird on the intended reading that Jan is the owner of the books.

- (173) a. Jan heeft (<sup>s</sup>de) twee moedervlekken op zijn rug.  
 Jan has the two birthmarks on his back  
 b. #Jan heeft de duizend boeken.  
 Jan has the thousand books

Second, the examples in (174) show that phrases like (171) can be used as the subject in an °expletive construction. Given that PPs normally cannot be used as subjects, these examples also provide additional evidence that we are dealing with spurious PPs with the actual value of a noun phrase.

- (174) a. Er liggen in de duizend boeken op zolder.  
 there lie in the thousand books in the attic  
 ‘There are more than a thousand books in the attic.’  
 b. Er liggen tegen de duizend flessen wijn in de kelder.  
 there lie against the thousand bottles of wine in the cellar  
 ‘There are nearly a thousand bottles of wine in the cellar.’

Finally, the indefiniteness of the noun phrases in (171) is also clear from the fact illustrated in (175) that its head can be replaced by °quantitative *er*, which is possible with indefinite noun phrases only; cf. Section 6.3 for discussion.

- (175) a. Hij heeft er in de duizend [*e*].  
 he has ER into the thousand  
 ‘He has more than a thousand of them.’  
 b. Hij heeft er tegen de duizend [*e*].  
 he has ER against the thousand  
 ‘He has nearly a thousand of them.’

Consider again example (174a). The fact that the definite article *de* does not contribute the meaning of definiteness to the phrase as a whole suggests that is not an immediate constituent of the noun phrase headed by *boeken*: a reasonable alternative is to analyze *in de duizend boeken* in such a way that *in de duizend* is a constituent quantifying *boeken*. This representation gives structural recognition to the fact that *in de duizend* alternates with *ruim duizend* ‘over a thousand’ in (172a), where *ruim duizend* is likewise a constituent.

- (176) a. [[in de duizend] boeken]  
 b. [[ruim duizend] boeken]

Note, however, that the analysis suggested in (176a) has the rather remarkable property that the numeral *duizend* is immediately preceded by a definite article, which is normally not possible: (*\*De*) *duizend is een groot getal* ‘Thousand is a large number’. It has therefore been suggested that the structure of *in de duizend boeken* is slightly more complex and features a phonetically empty “classifier” to the right of *duizend*: [[*in de duizend* (CLASSIFIER)] *boeken*]. This can perhaps be supported by the fact that such a “classifier” can at least marginally be spelled out overtly: *in de duizend* (*??stuks*) *boeken*. We leave it to future research to establish whether or not an analysis along this line is feasible.



So far, we have only illustrated the *de* + numeral construction by means of the prepositions *in* and *tegen*. There are, however, combinations involving other prepositions that are eligible for a similar kind of analysis. In (177) we divide the relevant prepositions into three groups.

- (177) a. more than: *boven, over, in*  
 b. less than: *beneden, onder, tegen*  
 c. approximately: *rond, om en nabij, tussen*

We give some examples in (178), which show that the original meaning of the prepositions can be readily recognized. Example (178f) further shows that the selection restrictions of the prepositions are also preserved: *tussen* 'between' must be followed by a coordinated phrase.

- (178) a. Kinderen beneden de drie (jaar) reizen gratis.  
 children below the three year travel free  
 'Children under the age of three travel free.'  
 b. als je onder de zeventig maar boven de vijftig bent  
 if you under the seventy but above the fifty are  
 c. Hij heeft al over de duizend boeken.  
 he has already over the thousand books  
 'He already has more than a thousand books.'  
 d. Hij was binnen de tien minuten hier.  
 he was within the ten minutes here  
 e. Het duurt rond/om en nabij de tien minuten.  
 it lasts around/around and close to the ten minutes  
 'It takes approximately ten minutes.'  
 f. Deze boeken kosten tussen de vijf en tien euro.  
 these books cost between the five and ten euros  
 'The price of these books ranges between five and ten euros.'

The examples in (179), which are adapted from actual examples found on the internet, show that at least in some cases additional modifiers can be added to the sequence P + numeral; we have not been able to find cases involving prepositions that trigger the approximative meaning. Since *ruim* and *ver* modify the cardinal number, examples like these may be construed as additional evidence for an analysis along the lines of (176a), where the sequence P + numeral is construed as a complex modifier of the noun.

- (179) a. Van Schagen heeft vermoedelijk *ver over de duizend* prenten gemaakt.  
 Van Schagen has probably far over the thousand prints made  
 'Van Schagen probably made much more than a thousand prints.'  
 b. Deze monitoren zijn verkrijgbaar voor *ruim onder de honderd* euro.  
 these screens are available for amply under the hundred euros  
 'These monitors are available for far less than one hundred euros.'

Before we conclude this section, we want to make a number of additional observations. The first is that, although it is clear that we are dealing with spurious PPs with the value of noun phrases, this does not mean that it is always possible to

replace these phrases with regular noun phrases: the two examples in (180) both express that the damage amounts to several thousands of euros, but nevertheless involve two different verbs.

- (180) a. De schade loopt in de duizend euro's.  
           the damage runs into the thousand euros  
           'The damage is more than a thousand euros.'
- a'. \*De schade loopt meer dan de duizend euro's.
- b. De schade belooft meer dan duizend euro's.  
           the damage BE-runs more than thousand euros
- b'. \*De schade belooft in de duizend euro's.

The construction in (180a) is also special in that the numeral can be pluralized, which results in a non-trivial meaning change: the sequence *in* + *numeral* no longer means "more than Num Ns" but "several Num<sub>pl.</sub> Ns"

- (181) De schade loopt in de duizenden euro's.  
           the damage runs into the thousands euros  
           'The damage is several thousands of euros.'

Finally, it can be noted that the use of the definite article in combination with a numeral is not entirely restricted to contexts with a preposition: whereas the prepositions cannot be omitted in (182a&b), example (182c) is perfectly acceptable without a preposition. Note that the noun *jaar* 'year' is preferably dropped in these examples due to the fact that it is more or less predictable in this context.

- (182) a. Hij loopt tegen de dertig (?jaar).  
           he runs towards the thirty year  
           'He is almost thirty (years old).'
- b. Hij is in de dertig (?jaar).  
           he is into the thirty year  
           'He is into his thirties.'
- c. Hij is de dertig (?jaar) al gepasseerd.  
           he is the thirty year already passed  
           'He's already past thirty.'

#### *B. Indefinite article + numeral: "approximately + numeral"*

Example (183a) shows that the indefinite article *een* can also be construed with numerals, which is surprising in view of the fact that *een* is not normally used in combination with plural noun phrases (except for the cases discussed in Section 5.1.4.2). In this context, *een* can be preceded by *zo*, giving rise to the contracted form *zo'n* in (183b). The interpretation of *een/zo'n tachtig boeken* is "approximately/about eighty books".

- (183) a. Hij heeft een tachtig boeken.  
           he has an eighty books
- b. Hij heeft zo'n tachtig boeken.  
           he has so an eighty books  
           'He has about eighty books.'

A related case, with similar semantics, is illustrated in (184). This example is less striking since *een* is construed with a singular noun phrase here. Note that *zo'n*, while in perfectly free variation with *een* in (183), is awkward in (184b).

- (184) a. Hij heeft een boek of tachtig.  
           he has a book or eighty  
           ‘He has about eighty books.’  
       b. <sup>??</sup>Hij heeft zo'n boek of tachtig.  
           he has so a book or eighty

The constructions in this section are discussed more extensively in Section 6.1.1.4.

#### 5.1.4.4. *The definite article in inalienable possession constructions*

This section will discuss the use of definite determiners (instead of a possessive pronoun) in inalienable possession constructions. The first subsection will show that Dutch normally does not allow this option, but there are a number of systematic exceptions involving locational constructions which will be discussed in the second subsection. The third subsection will conclude with a discussion a number of more idiomatic examples.

##### *I. Non-locational constructions*

Standard Dutch normally does not use the definite article in inalienable possession constructions, but resorts to possessive pronouns as in (185a); as a result this example is ambiguous between a reading on which Jan broke his own, and a reading on which he broke somebody else's leg. Examples (185b) and (185c&c') are only used to express inalienable possession in certain varieties of Dutch spoken in the east of the Netherlands: cf. Cornips (1991/1994).

- (185) a. Jan<sub>i</sub> brak zijn<sub>i,j</sub> been.  
           Jan broke his leg  
       b. \*Jan<sub>i</sub> brak het<sub>i</sub> been.  
           Jan broke the leg  
       c. \*Jan<sub>i</sub> brak zich<sub>i</sub> het<sub>i</sub> been.  
           Jan broke REFL the leg  
       c'. \*Jan brak Marie<sub>i</sub> het<sub>i</sub> been  
           Jan broke Marie the leg

Note that we have extended the normal use of indices in these examples in order to express the intended inalienable possessive reading: coindexing of noun phrases will be used in this section to indicate coreference as usual, and coindexing of a noun phrase and a definite article will be used to indicate the inalienable possession relation. Thus, the sentence in (185b) is acceptable in Standard Dutch, but not on the intended, inalienable possession reading that Jan broke his own leg expressed by the co-indexing of *Jan* and *het*.

##### *II. Locational constructions*

There is a systematic exception to the general rule that inalienable possession is expressed by means of a regular possessive pronoun in Standard Dutch: when the

possessee is part of a locational PP and there is a PP-external noun phrase that may act as an inalienable possessor, there is a free alternation between the possessive pronoun and the definite determiner; cf. Broekhuis & Cornips (1997). A typical example is given in (186a). The PPs in inalienable possession constructions of this sort function as °complementives, which is clear from the fact, illustrated in (186b), that they cannot undergo PP-over-V. Another typical property of these examples, which is illustrated in (186c), is that the possessor at least marginally alternates with a *bij*-PP; cf. Corver (1992).

- (186) a. Marie heeft Jan<sub>i</sub> het kind in zijn<sub>i</sub>/de<sub>i</sub> armen geduwd.  
           she has Jan the child into his/the arms pushed  
           ‘Marie has pushed the child into Jan’s arms.’  
       b. \*Marie heeft Jan<sub>i</sub> het kind geduwd in zijn<sub>i</sub>/de<sub>i</sub> armen  
       c. <sup>(?)</sup>Marie heeft het kind bij Jan<sub>i</sub> in zijn<sub>i</sub>/de<sub>i</sub> armen geduwd.

Example (186a) shows that the inalienable possessor is the object *Jan*. This exhausts the possibilities: the subject *Marie* cannot function as the possessor. The following discussion addresses the question of when a noun phrase may function as an inalienable possessor, and with a brief note on the argument that the complementive PP containing the possessee is predicated of.

#### A. Dative possessors

In German, inalienable possessors are typically dative phrases (which holds both for locational and non-locational inalienable possession constructions). Although Dutch does not show morphological case distinctions, the same thing is arguably true for locational constructions like (186a). In order to see this, consider the structurally similar example in (187a). That the possessor is not accusative but dative is clear from °passive formation: example (187b) shows that in the regular passive, it is not the possessor *Jan* that gets promoted to subject, but the noun phrase *de boeken* ‘the books’; (187c) shows that in the so-called *krijgen*-passive the possessor is promoted to subject. This is sufficient to conclude that the possessor is an indirect object, and is hence assigned (abstract) dative case.

- (187) a. Marie heeft Jan<sub>i</sub> de boeken in de<sub>i</sub> armen geduwd.  
           Marie has Jan the books into the arms pushed  
           ‘Marie has pushed the books in Jan’s arms.’  
       b. De boeken werden Jan<sub>i</sub> in de<sub>i</sub> armen geduwd.  
       c. Jan<sub>i</sub> kreeg de boeken in de<sub>i</sub> armen geduwd.

Note that example (187c) shows that inalienable possessors may function as subjects when they correspond to an “underlying” indirect object. We will discuss this more extensively in the next subsection.

#### B. Nominative possessors

The previous subsection has shown that a subject may function as inalienable possessor when it corresponds to an underlying indirect object. Now consider the examples in (188) with the verb *geven* ‘to give’. Example (188b) is excluded due to the fact that *krijgen*-passivization of the verb *geven* is impossible. Broekhuis &

Cornips (1997) have claimed that this is due to the fact that the intended meaning can also be expressed by means of example (188b').

- (188) a. Marie *gaf* Jan<sub>i</sub> het kind in de<sub>i</sub> armen.  
 Marie has Jan the child into the arms  
 'Marie gave the child into Jan's arms.'
- b. \*Jan<sub>i</sub> kreeg het kind in de<sub>i</sub> armen gegeven.  
 Jan got the child in the arms given
- b'. Jan<sub>i</sub> kreeg het kind in de<sub>i</sub> armen.  
 Jan got the child in the arms

Perhaps one might argue that (188b') is derived from (188b) by elision of the semantically light participle *gegeven* 'given'; see the next subsection for more evidence for the semantic lightness of *geven* 'to give'. If so, we may conclude that this example is fully compatible with the claim that inalienable possessive subjects are "underlying" indirect objects.

The dynamic verb *krijgen* has a more static counterpart, *hebben*, which also allows inalienable possessive subjects; cf. (189). We may account for this by assuming that the subjects in these examples are also "indirect" underlyingly. If this suggestion is on the right track, this may lead to the conclusion that, alongside the more familiar °unaccusative verbs, there is a set of "undative" verbs that take a goal argument, but which are not able to assign dative case as a result of which the goal argument must be realized as a nominative subject. An argument in favor of this analysis is that verbs like *hebben* and *krijgen* cannot be passivized: this might be due to the fact that they do not have an agentive argument.

- (189) a. Jan<sub>i</sub> heeft het kind in de<sub>i</sub> armen.  
 Jan got the child in the arms
- b. Hij<sub>i</sub> had een hoed op zijn<sub>i</sub>/het<sub>i</sub> hoofd.  
 he had a hat on his/the head
- c. Hij<sub>i</sub> had geen sokken aan zijn<sub>i</sub>/de<sub>i</sub> voeten.  
 he had no socks on his/the feet

If this analysis of the examples with *krijgen* and *hebben* is on the right track, we may expect there to be more undative verbs: good candidates are the verbs *nemen* 'to take' and *houden* 'to keep'; these verbs also seem to take subjects with a kind of goal role, show an aspectual difference like *krijgen* and *hebben*, and resist passivization.

- (190) a. Jan neemt de boeken.                    a'. \*De boeken worden genomen.  
 Jan takes the books                    the books are taken
- b. Jan houdt de boeken.                    b'. \*De boeken worden gehouden.  
 Jan keeps the books                    the books are kept

Furthermore, the examples in (191) show that the subjects of these verbs may indeed function as inalienable possessors. However, there is a little snag: it seems that the passive counterparts of these examples are better than those in (190), which is also clear from the fact that they can readily be found on the internet. This means that we can only maintain our claim if we assume that the verb *nemen* with a PP-

complementive is ambiguous between an agentive transitive and less agentive undative form. Perhaps this can be supported by the fact that the particle verb *meenemen* 'take away' is clearly agentive and readily allows passivization. We will leave this issue for future research.

- (191) a. Jan<sub>i</sub> neemt het kind in de<sub>i</sub> armen.  
           Jan takes the child in the arms  
       a'. <sup>?</sup>Het kind werd in de armen genomen.  
           the child was in the arms taken  
       b. Jan<sub>i</sub> houdt het kind in de<sub>i</sub> armen.  
           Jan takes the child in the arms  
       b'. <sup>?</sup>Het kind werd in de armen gehouden.  
           the child was in the arms kept

### *C. Accusative possessors*

It is not expected that the direct object of a locational construction can act as an inalienable possessor given that it functions instead as the entity that is located with respect to the possessee: the direct object *een hand* in (192), for example, is the entity that is given a certain location with respect to the object of the locational PP.

- (192) a. Marie legde een hand op Peters schouder.  
           Marie put a hand on Peters shoulder  
       b. Marie legde Peter<sub>i</sub> een hand op de<sub>i</sub> schouder.  
           Marie put Peter a hand on the shoulder

Nevertheless, there is a class of verbs that systematically allow what seems to be their direct object to act as an inalienable possessor: the common denominator of these verbs is that they imply some form of bodily contact between the subject and the direct object of the clause; cf. Broekhuis et al. (1996). Some examples are given in (193) and (194); the (b)- and (c)-examples show that these examples allow regular passivization but not semi-passivization, which should be sufficient to show that we are dealing with a direct and not an indirect object in the (a)-examples.

- (193) a. De hond beet Peter<sub>i</sub> in het<sub>i</sub> been.  
           the dog bit Peter in the leg  
       b. Peter<sub>i</sub> werd in het<sub>i</sub> been gebeten.  
           Peter was in the leg bitten  
       c. \*Peter kreeg in het been gebeten.  
           Peter got in the leg bitten  
       (194) a. Marie kuste Peter<sub>i</sub> op het<sub>i</sub> voorhoofd.  
           Marie kissed Peter on the forehead  
       b. Peter<sub>i</sub> werd op het<sub>i</sub> voorhoofd gekust.  
           Peter was on the forehead kissed  
       c. \*Peter kreeg op het voorhoofd gekust.  
           Peter got on the forehead kissed

Still, there are reasons to doubt the conclusion that we are dealing with direct objects in the (a)-examples of (193) and (194). First, it must be noted that the verbs

that enter inalienable possession constructions like those in (193) and (194) are generally denominal and can be paraphrased by means of the light verb *geven* followed by an indefinite noun phrase. Some examples are given in (195); see Section 5.1.4.1, sub III, for a discussion of the semantic difference between the denominal and the light verb construction.

- (195) a. *bijten* 'to bite'     $\approx$  *een beet geven*    'to give a bite'  
       b. *kloppen* 'to knock'     $\approx$  *een klop(je) geven*    'to give a (gentle) blow'  
       c. *kussen* 'to kiss'     $\approx$  *een kus geven*    'to give a kiss'  
       d. *slaan* 'to blow'     $\approx$  *een slag geven*    'to give a blow'  
       e. *steken* 'to sting'     $\approx$  *een steek geven*    'to give a sting'  
       f. *trappen* 'to kick'     $\approx$  *een trap geven*    'to give a kick'

This implies that the examples in (193a) and (194a) are more or less equivalent to those in (196), in which the inalienable possessor does function as indirect object. Now if we assume that the semantically light verb *geven* has a phonetically empty counterpart that triggers so-called incorporation of the direct object, by which the denominal verbs in (195) are derived, we may maintain that the inalienable possessors in (193a) and (194a) actually have the same  $\theta$ thematic role as the indirect objects in (196).

- (196) a. *De hond gaf Peter<sub>i</sub> een beet in het<sub>i</sub> been.*  
           the dog gave Peter a bite in the leg  
       b. *Marie gaf Peter<sub>i</sub> een kus op het<sub>i</sub> voorhoofd.*  
           Marie gave Peter a kiss on the forehead

The suggested analysis for the problematic examples in (193a) and (194a) makes it possible to maintain the claim that inalienable possessors must be (underlying) goals. Of course, we still have to solve the problem that regular passivization is possible, but semi-passivization is not. Broekhuis et al. (1996) claim that this is due to the fact that these examples are actually ambiguous between a structure with a dative and a structure with an accusative object; they substantiate this by referring to the German examples in (197), in which the possessor may appear either as a dative or an accusative DP.

- (197) a. *Der Hund hat mir/mich ins Bein gebissen.*  
           the dog has me<sub>dat.</sub>/me<sub>acc</sub> in.the leg bitten  
       b. *Peter hat ihr/sie auf den Mund geküßt.*  
           Peter has her<sub>dat</sub>/her<sub>acc</sub> on the mouth kissed

This still does not solve the entire problem given that there does not seem to be any discernable meaning difference between the two alternatives. There may be several ways to solve this problem, but we will leave this to future research and refer the reader to Broekhuis et al. (1996: fn.3) for a suggestion.

#### *D. Located argument*

The PPs in the locational constructions discussed above are predicative in the sense that they take an argument and assign it a location with respect to their complement, the possessee. This located argument is generally the direct object, but we have seen

that it may also appear as the subject in regular passive constructions. The relevant example is repeated here as (198b).

- (198) a. Marie heeft Jan<sub>i</sub> de boeken in de<sub>i</sub> armen geduwd.  
 Marie has Jan the books into the arms pushed  
 'Marie has pushed the books into Jan's arms.'  
 b. De boeken werden Jan<sub>i</sub> in de<sub>i</sub> armen geduwd.

Given that unaccusative verbs also involve a derived subject with the thematic role of theme, we expect that the subjects of these verbs may also function as inalienable possessors. The examples in (199) show that this prediction is indeed borne out.

- (199) a. Het kind<sub>i</sub> is Jan<sub>i</sub> in de<sub>i</sub> armen gesprongen.  
 the child has Jan into the arms jumped  
 'The child jumped into Jan's arms.'  
 b. De tranen<sub>i</sub> sprongen Peter<sub>i</sub> in de<sub>i</sub> ogen.  
 the tears jump Peter into the eyes  
 'Peter's eyes flooded with tears.'

### *III. Idioms*

Inalienable possession is also a common property of idioms. These idioms may involve locational constructions, as in the examples in (200): they differ from the more regular locational constructions in that the definite article cannot be replaced by a possessive pronoun without losing or at least jeopardizing the idiomatic meaning.

- (200) a. iemand<sub>i</sub> iets op de mouw<sub>i</sub> spelden  
 somebody<sub>dat</sub> something on the sleeve pin  
 'to delude someone'  
 b. iemand<sub>i</sub> de hand boven het hoofd<sub>i</sub> houden  
 somebody<sub>dat</sub> the hand above the head hold  
 'to protect someone'

Idioms may also take an entirely different form. The examples in (201) involve cases in which the possessee is part of an °absolute *met*-construction. Or perhaps it is better to speak about possesseees, given that the possessors *men* and *hij* are also construed as the possessor of the located object. In (201a), the articles cannot readily be replaced by a possessive pronoun whereas this seems the more common form of (201b). Perhaps this is related to the fact that it is easier to identify the former example as an idiom.

- (201) a. [Met de hoed in de hand] komt men door het ganse land.  
 with the hat in the hand comes one through the whole land  
 'There is nothing lost by civility.'  
 b. Hij stond [met zijn/de handen in zijn/de zij].  
 he stood with his/the hands in his/the side

Example (202a) shows that there are also idiomatic cases in which an indirect object acts as the possessor of a theme that surfaces as a direct object. Example (202b)



contains the unaccusative verb *lopen* and involves a theme that surfaces as a subject of the clause. Examples like (202a&b) resemble the productive patterns that can be found in the eastern and western dialects of Dutch and in German.

- (202) a. Hij kust haar de hand.  
           he kisses her the hand  
           ‘He kisses her hand.’  
       b. Het hoofd loopt me om.  
           the head runs me around  
           ‘My head is spinning.’

#### 5.1.5. The negative article *geen* ‘no’

This section will discuss the negative element *geen* ‘no’. Although this element is part of a noun phrase, it normally takes clausal °scope in the sense that it expresses sentential negation and can therefore often be seen as a stand-in for the combination of the negative adverb *niet* and the indefinite article *een*. A pair of examples illustrating the alternation between *niet een* and *geen* is given in (203).

- (203) a. Ik koop natuurlijk geen auto met het stuur aan de rechterkant.  
           I buy of course no car with the steering wheel on the right.side  
           ‘Of course I don’t buy a car that has the steering wheel on the right-hand side.’  
       b. Ik koop natuurlijk niet een auto met het stuur aan de rechterkant.  
           I buy of course not a car with the steering wheel on the right.side  
           ‘Of course I don’t buy a car that has the steering wheel on the right-hand side.’

The alternation in (203) has given rise to the idea that *geen* is the result of a fusion of the negative adverb and the indefinite article; cf. Haeseryn et al. (1997: §29.4). However, such alternations are possible only in a very small subset of the contexts in which *geen* and *niet een* are usable. Not all occurrences of *geen* can be replaced by *niet een*; Table 1 in the introduction to this section on articles has shown that *geen* can occur with a larger variety of noun phrases than the indefinite article *een*, such as plural and non-count nouns; cf. also Section 5.1.5.2, sub I. Furthermore, we will see there are also several syntactic constructions in which replacing the combination of *niet een* with *geen* fails. It seems therefore difficult to maintain that *geen* is the result of fusion of the negative adverb *niet* and the indefinite article *een*.

Actually, it is by no means clear that *geen* is a determiner: we have suggested in several places that *een* should perhaps be analyzed as a numeral, and for *geen* there is even more evidence to support such an assumption. For example, *geen* can be used in constructions like (204a) with °quantitative *er*, in which respect it differs from all determiners but resembles the numerals and the °weak quantifiers. The same thing holds for the partitive construction in (204b): in this construction *geen* can be replaced by a numeral and certain quantifiers but not by a determiner. Finally, the (c)-examples show that *geen* can be modified by adverbial phrases like *vrijwel/bijna*, an option it shares with some numerals and quantifiers, but which is never available for determiners. Given these data, it might be fully justified to consider *geen* not an article but a numeral or a quantifier. Despite this, we will discuss *geen* here and not in Chapter 6, using the notion of negative article instead of quantifier.

- (204) a. Ik heb er [geen/drie [e]] gezien.  
 I have ER no/three seen  
 b. Ik heb geen/drie van die boeken gekocht.  
 I have no/three of those books bought  
 c. Ik heb bijna geen/honderd/alle boeken gelezen.  
 I have nearly no/hundred/all books read  
 c'. Ik heb vrijwel geen/alle boeken gelezen.  
 I have virtually no/all books read

Section 5.1.5.1 starts with a concise discussion of the semantic contribution of *geen*. This is followed in Section 5.1.5.2 by a discussion of the distribution of *geen* inside the noun phrase. Section 5.1.5.3 concludes with a discussion of the distribution of noun phrases containing *geen* and gives some remarks on the use of *geen* as an independent constituent.

#### 5.1.5.1. The semantics of *geen* 'no'

As was previously discussed in Section 5.1.1.1, the core meaning of the negative article *geen* can readily be described by means of Figure 1 from Section 1.1.2.2.1, repeated below; its semantic contribution is normally to indicate that the intersection  $A \cap B$  is empty. For instance, an example like *Er zwemmen geen ganzen in de vijver* 'There are no geese swimming in the pond' expresses that the intersection of the set of geese and the set of entities swimming in the pond is empty.

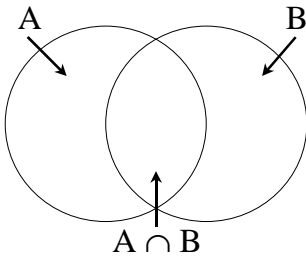


Figure 1: Set-theoretic representation of the subject-predicate relation

The discussion in the following sections will show, however, that a simple description like this does not do full justice to the intricacies involved in the semantics of *geen*. Section 5.1.5.1.1 investigates the scope of the negation expressed by *geen*, followed in 5.1.5.1.2 by a discussion of *geen* in (non-)specific and generic noun phrases. Section 5.1.5.1.3 concludes by showing that in many cases *geen* may exhibit special semantic properties that may be totally unrelated to its core meaning.

##### 5.1.5.1.1. Negative quantification and scope

This section discusses the scope of the negation inherently expressed by *geen*. Subsection I considers the most common situation in which *geen* expresses sentential negation, that is, takes scope over the complete clause in which it occurs. Subsection II discusses cases of constituent negation, in which case *geen* simply has

scope over the noun phrase containing *geen*. Negation can also have scope over a subpart of the noun phrase containing *geen*, as will be shown in Subsection III. Subsection IV will show that, unlike sentential *niet*, *geen* cannot take some other constituent of the clause in its scope.

### *I. Scope outside the containing noun phrase*

The core semantics of *geen* is that of negation, but although *geen* forms a syntactic constituent with the noun it precedes, the scope of negation is not necessarily confined to the noun phrase; in the majority of cases, the negation in *geen* takes sentential scope. This is particularly clear from the fact illustrated in (205) that *geen* can license °negative polarity items like *ooit* ‘ever’ and *ook maar X* ‘any X’, which can only be used in the presence of a structurally superior negative element; note that this holds regardless of whether the *geen* phrase is an argument, as in (205a), or an °adjunct, as in (205b). That it is really the presence of *geen* that licenses these negative polarity items is clear from the fact that *geen* does not alternate with *een* in (205), though this would be possible in the absence of the negative polarity items.

- (205) a. Ik zou geen/\*een auto ooit aan ook maar iemand cadeau geven.  
 I would no/a car ever to anyone present give  
 ‘No car would I ever give to anyone as a present.’  
 b. Ik zou geen/\*een moment ook maar ergens met hem willen praten.  
 I would no/a moment anywhere with him want talk  
 ‘At no time would I want to talk to him at any place.’

The examples in (206) and (207) also support the conclusion that *geen* can take sentential scope. First, observe from the contrast in (206a&b) that the sentential negative adverb *niet* cannot occur in clause-initial position; example (206b’) shows that this is even excluded when *niet* is pied piped by a topicalized participial verb phrase.

- (206) a. Ik heb die brief niet geschreven.  
 I have that letter not written  
 ‘I didn’t write that letter.’  
 b. \*Niet heb ik die brief geschreven.  
 b’. \*[<sub>VP</sub> Niet geschreven] heb ik die brief.

Crucial for our argument is that the ungrammaticality of (206b’) shows that phrases containing sentential negation cannot be topicalized (whereas this is possible in the case of constituent negation), as this allows us to conclude from the ungrammaticality of (207b) that the noun phrase *geen brief* expresses sentential negation. This argument is somewhat weakened, however, by the fact that the stronger form of negation *geen enkele* ‘not a single’ is not subject to this restriction; we will discuss this in Section 5.1.5.1.3.

- (207) a. Ik heb geen brief geschreven.  
 I have no letter written  
 ‘I didn’t write a letter.’  
 b. \*[<sub>NP</sub> Geen brief] heb ik geschreven.

## II. Scope over the containing noun phrase: contrastive constructions

In contrastive contexts, *geen* may be used as a constituent negator. When the noun phrase is singular, *geen* usually alternates with *niet een*, as is illustrated in (208a), but when the noun phrase is plural the use of *geen* is the only option, as shown by the (b)-examples in (208).

- (208) a. Er is geen/niet een BRIEF gekomen maar een PAKJE.  
 there is no/not a letter come but a parcel  
 'There came not a letter but a parcel.'
- b. Er zijn geen BRIEVEN gekomen maar een PAKJE.  
 there are no letters come but a parcel
- b'. \*Er zijn niet Ø/een BRIEVEN gekomen maar een PAKJE.  
 there are not Ø/a letters come but a parcel

Topicalization of a *geen* phrase expressing constituent negation, as in (209a), is at least marginally possible, and seems to lead to a better result than topicalization of the negative adverb *niet* and its associate noun phrase.

- (209) a. ?Geen BRIEF heb ik geschreven maar een MEMO.  
 no letter have I written but a memo  
 'I wrote not a letter but a memo.'
- b. ??Niet een BRIEF heb ik geschreven maar een MEMO.  
 not a letter have I written but a memo

Using *geen* in contrastive contexts is excluded when the noun phrase functions as the complement of a PP. In fact, Haeseryn et al. (1997: 1657) noticed that *geen*-phrases occur as the complement of PPs in idiomatic constructions only; see Section 5.1.5.3 for more discussion.

- (210) a. Dat moet je niet met een KWAST verven, maar met een ROLLER.  
 that must you not with a brush paint but with a roller  
 'You shouldn't paint that with a brush, but with a roller.'
- b. \*Dat moet je met geen KWAST verven, maar met een ROLLER.  
 that must you with no brush paint but with a roller

The fact that *geen* and *niet een* alternate in sentences like (208a) sharply contrasts with the lack of a similar alternation in examples like those given in (211). These examples show that, in contrast to *geen*, negative quantifiers/adverbs like *niemand*, *niets*, *nergens* and *nooit* cannot be used in contrastive contexts.

- (211) a. Er is niet IEMAND/\*NIEMAND gekomen maar IEDEREEN.  
 there is not somebody/nobody come but everyone  
 'Not somebody came but everybody.'
- b. Er is niet IETS/\*NIETS misgegaan maar ALLES.  
 there is not something/nothing wrong.gone but everything  
 'Not something but everything has gone wrong.'
- c. Er is niet ERGENS/\*NERGENS corruptie gepleegd maar OVERAL.  
 there is not somewhere/nowhere corruption committed but everywhere  
 'Not somewhere but everywhere there was corruption committed.'

- d. Er is niet OOI/\*NOOI corruptie gepleegd maar ALTIJD.  
 there is not once/never corruption committed but always  
 'Not once but always there has been corruption.'

We want to emphasize that, outside of contrastive contexts such as (208), replacing *geen* with *niet een* is impossible in most cases. Thus, in a neutral sentence such as (212), it would be odd to use *niet een* instead of *geen*. This strongly suggests that *geen* cannot systematically be treated as a contraction of *niet* and the indefinite article *een*, as this would lead to the wrong expectation that the infelicity of (212) with *niet een* would be preserved when *niet* and *een* are fused into *geen*.

- (212) Er is geen/#niet een brief gekomen.  
 there is no/not a letter come  
 'There didn't come any letter.'

### III. Scope inside the containing noun phrase

The two previous subsections have shown that *geen* takes scope either outside the noun phrase, expressing sentential negation, or over the noun phrase that contains it, expressing constituent negation. This does not exhaust the possibilities; *geen* may also take scope over an attributive modifier within the noun phrase rather than over the noun phrase as a whole. We find an example of this type in (213a), which alternates with the semantically more transparent (213b). While (213b) is unambiguous and has only a reading where *niet* negates the adjective *geringe*, (213a) is ambiguous between that reading and a reading in which *geen* negates the entire noun phrase. The latter reading comes to the fore in the unambiguous paraphrase in (213c), where *niet* precedes the indefinite article.

- (213) a. Dat is geen geringe prestatie.  
 that is no insignificant accomplishment  
 b. Dat is een niet geringe prestatie.  
 that is a not insignificant accomplishment  
 c. Dat is niet een geringe prestatie.  
 that is not an insignificant accomplishment

Note that, if one wanted to treat *geen* as the contraction of *niet* and the indefinite article *een*, one would have to assume that the order of *niet* and *een* is immaterial; both *een niet* in (213b) and *niet een* in (213c) should be able to "fuse" into *geen*.

Scopal ambiguity of a similar nature to that in (213a) is found in noun phrases of the type illustrated in (214a), whose ambiguity comes out in the paraphrases in (214b&c). Depending on the precise analysis of noun phrases of the type *professor Van Riemsdijk* (see 4.1.3 for a suggestion), either (214b) or (214c) instantiates a case in which *geen* takes scope over a subpart of the noun phrase it is contained by.

- (214) a. Ik ken geen professor Van Riemsdijk.  
 I know no professor Van Riemsdijk  
 b. Ik ken [geen Van Riemsdijk] die professor is.  
 I know no Van Riemsdijk that professor is  
 c. Ik ken [geen professor] die Van Riemsdijk heet.  
 I know no professor that Van Riemsdijk is.called

#### IV. No scope over a noun phrase external constituent

Although the previous section has shown that *geen* can be semantically associated with an element with which it does not form a constituent, such syntax/semantics mismatches are certainly not possible in just any context. In order to see this, first observe that the negative adverb *niet* in (215a) can be semantically construed with the adverbial phrase of manner *goed* ‘well’, even though it does not form a constituent with it, which is clear from the fact that it must be stranded under topicalization. In (215b), by contrast, the negative article *geen* cannot be associated with the adverbial phrase; the sentence is marginally acceptable at best on a highly marked count noun reading of *hitte*.

- (215) a. Ik verdraag hitte niet (goed).  
           I bear heat not well  
           a'. \*Niet goed verdraag ik hitte.  
           a''. Goed verdraag ik hitte niet.  
           b. \*Ik verdraag geen hitte goed.  
           I bear no heat well

We can conclude from this that although the scope of *geen* is not confined to that of its noun phrase but can be extended to the clause or limited to a subpart of the noun phrase, *geen* is still tied up with its noun phrase in the sense that it cannot be semantically associated with other constituents of the clause.

##### 5.1.5.1.2. Specificity and genericity

Noun phrases containing *geen* pattern syntactically with the indefinite noun phrase. This is clear, for example, from the fact illustrated in (216a) that subjects containing *geen* must occur with the °expletive *er*; apart from example (216a'), which is acceptable on the special “not a single” reading that will be discussed in 5.1.5.1.3, all primed examples are degraded. Note that this is not due to the restriction on topicalization discussed in 5.1.5.1.1, sub I, given that subjects need not be topics; cf. Section 8.1.2.2.

- (216) a. Er is vandaag geen brief verstuurd.  
           there is today no letter sent  
           ‘No letter was sent today.’  
           a'. #Geen brief is vandaag verstuurd.  
           b. Er spelen vandaag geen kinderen op straat.  
           there play today no children in the street  
           ‘There are no children playing in the street.’  
           b'. \*Geen kinderen spelen vandaag op straat.  
           c. Er stond gisteren geen melk in de ijskast.  
           there stands yesterday no milk in the fridge  
           ‘There was no milk in the fridge yesterday.’  
           c'. \*Geen melk stond gisteren in de ijskast.'

Another finding in support of the indefiniteness of noun phrases containing *geen* is that they cannot be scrambled across certain adverbials: cf. Section 8.1.3.1, sub III.

This is illustrated by the unacceptability of scrambled counterparts of the primeless examples in (216), given in (217).

- (217) a. \*<sup>?</sup>Er is geen brief vandaag verstuurd.  
 b. \*Er spelen geen kinderen vandaag op straat.  
 c. \*Er stond geen melk gisteren in de ijskast.

It seems that noun phrases with *geen* behave like indefinites even in generic contexts. In order to see this, consider the generic constructions in (218). Example (218a) shows that the generic plural noun phrase must be scrambled to a position in front of the °clause adverb *waarschijnlijk* ‘probably’; cf. Section 8.1.3.1, sub III. The noun phrase with *geen* in (218b), by contrast, cannot be placed to the left of *waarschijnlijk*.

- (218) a. Hij begrijpt <formules> waarschijnlijk <\*formules> niet.  
 he understands formulae probably not  
 ‘He probably doesn’t understand formulae.’  
 b. Hij begrijpt <\*geen formules> waarschijnlijk <geen formules>.  
 he understands no formulae probably  
 ‘He probably doesn’t understand formulae.’

To conclude this section, note that negative sentences with generic bare noun phrases sometimes feature intriguing semantic differences between the variants involving *niet* and their counterparts with *geen*. Example (219a), for example, allows two subtly different lexical meanings of *accepteren* ‘to accept’; the speaker either does not wish to receive any charity, or he is opposed to the existence of charity as a phenomenon. This latter reading is conspicuously more prominent in (219b).

- (219) a. Ik accepteer geen liefdadigheid.  
 I accept no charity  
 b. Ik accepteer liefdadigheid niet.  
 I accept charity not

#### 5.1.5.1.3. *Special semantics*

The previous sections have discussed the core semantics of the negative article *geen*. This section addresses a number of more or less specialized meaning contributions of *geen*. We will start our discussion with the “not a single” reading, which stays close to the core semantics of negative quantification, but we will see that there are contexts in which the semantic contribution made by *geen* can diverge substantially from the core meaning; negative quantification is sometimes even entirely absent in some of *geen*’s uses.

##### *I. “Not a single” reading*

The negative article *geen* sometimes expresses a meaning that is stronger than simple negation and which we will refer to as the “not a single” reading. This reading requires that *geen* be followed by some stressed element, and can sometimes be enhanced by the addition of certain elements.

A. *Geen* + *N*

The “not a single” reading is particularly common for noun phrases in subject position, as in (220a); in non-expletive constructions, all subjects containing *geen* are of this type. Objects containing *geen* can receive this interpretation as well, and, for topicalized objects, this reading is in fact the only one available; cf. the discussion of (207).

- (220) a. *Geen schip* is 100% waterdicht.  
           no ship       is 100% watertight  
           ‘Not a single ship is 100 per cent watertight.’  
       b. ?*Geen schip* levert    men 100% waterdicht af.  
           no ship       delivers one 100% watertight prt.  
           ‘Not a single ship is 100 per cent watertight at the point of delivery.’

Prosodically, the “not a single” reading of *geen* phrases is directly recognizable by the fact that there is main stress on the element immediately following *geen*. This is often the head noun, but when an attributive adjective is present, it is the adjective that receives greatest prominence.

- (221) a. [*geen* SCHIP] is 100% waterdicht  
       b. [*geen* NIEUW schip] is 100% waterdicht

Despite the fact that *geen* is part of the noun phrase, it can take scope outside the noun phrase, which is clear from the fact that *geen* can license negative polarity items like *ooit*; cf. Section 5.1.5.1.1, sub I. This is illustrated in (222a) for a subject and in (222b) for a topicalized object.

- (222) a. *Geen computerprogramma* is *ooit* volledig    storingsvrij.  
           no computer.program    is ever completely error.free  
       b. ?*Geen computerprogramma* heeft dit bedrijf    *ooit* storingsvrij afgeleverd.  
           no computer.program    has   this company ever error.free delivered

B. *Geen* enkel(e) + *N*

The “not a single” reading of *geen* phrases is particularly common for subjects of comparative constructions.

- (223) a. *Geen schip* vaart sneller naar Engeland dan het onze.  
           no ship       sails faster to England    than ours  
       b. *Geen limonade* smaakt lekkerder dan deze.  
           no lemonade   tastes nicer       than this.one

A distinction within this class of constructions should be made, however, between comparatives like the ones in (223), where particular makes or brands of the same product type are compared, and those like (224), where two different types of product are compared. In contrast to the primeless examples, the primed examples in (224) sound distinctly odd.



- (224) a. Een schip vaart sneller dan een luchtballon.  
           a ship sails faster than a hot.air.balloon  
       a'. <sup>??</sup>Geen schip vaart sneller dan een luchtballon.  
           no ship sails faster than a hot.air.balloon  
       b. Limonade smaakt lekkerder dan versgeperst sinaasappelsap.  
           lemonade tastes nicer than freshly.squeezed orange.juice  
       b'. <sup>??</sup>Geen limonade smaakt lekkerder dan versgeperst sinaasappelsap.  
           no lemonade tastes nicer than freshly.squeezed orange.juice

The messages that the primed examples in (224) intend to express can be expressed when we add the modifier *enkel(e)*, as in (225a&b). In accordance with the generalization that main stress must be assigned to the element following *geen*, main prosodic prominence is assigned to the modifier: *geen ENkel(e) N*.

- (225) a. Geen ENkel schip vaart sneller dan een luchtballon.  
           no single ship sails faster than a hot.air.balloon  
       b. Geen ENkele limonade smaakt lekkerder dan versgeperst sinaasappelsap.  
           no single lemonade tastes nicer than freshly.squeezed orange.juice

The modifier *enkele* can also be used when reference is made to specific entities, as in (226). In this use, *enkele* alternates with the numeral *één*, which will be discussed in the following subsection.

- (226) a. Hij heeft geen enkele/één fout gemaakt.  
           he has no single/one mistake made  
           ‘He didn’t make a single mistake.’  
       b. Ik heb geen enkel/één boek verkocht.  
           I have no single/one book sold  
           ‘I haven’t sold a single book.’

### C. Geen één + N

The “not a single” reading can also be emphasized by adding the element *één*, as in the primeless examples in (227). These examples alternate with the constructions with the negative adverb *niet* in the primed examples, which clearly involve the numeral *één*. Note that in both constructions, negation is construed with the numeral and that emphasis is put on the fact that the number of mistakes made/books sold is zero; as a result, main accent must also be assigned to the numeral in the primed examples.

- (227) a. Hij heeft geen ÉÉN fout gemaakt.  
           he has no one mistake made  
           ‘He didn’t make a single mistake.’  
       a'. Hij heeft niet ÉÉN fout gemaakt.  
           he has not one mistake made  
       b. Ik heb geen ÉÉN boek verkocht.  
           I have no one book sold  
           ‘I haven’t sold a single book.’  
       b'. Ik heb niet ÉÉN boek verkocht.  
           I have not one book sold

D. Geen ene + *N*

The “not a single” interpretation of *geen* is the one normally found in the numerous idiomatic constructions featuring *geen* phrases. The idiomatic noun phrases in (228) have the prosody characteristic of the “not a single” cases discussed above: main accent is assigned to the element following *geen*. The primed examples show that the idiomatic examples also pattern with the non-idiomatic ones in allowing topicalization.

- (228) a. Hij heeft er geen Jota/MOER van begrepen.  
           he has there no iota/nut of understood  
           ‘He didn’t understand a word of it.’  
       a’. Geen Jota/MOER heeft hij ervan begrepen.  
       b. Hij heeft geen Vinger/HAND/POOT uitgestoken.  
           he has no finger/hand/leg stuck.out  
           ‘He didn’t lift a finger.’  
       b’. Geen Vinger/HAND/POOT heeft hij uitgestoken.

Addition of *enkel(e)* is impossible in these idiomatic examples; however, *geen* can often be intensified by the addition of schwa-inflected *ene* ‘one’, as in (229a). By way of contrast, in non-idiomatic examples like (229b), *geen ene* cannot be used; only the uninflected form *één* or the modifier *enkel(e)* can be used.

- (229) a. Hij heeft er geen Ene/\*ENkele/\*ÉÉN jota/moer van begrepen.  
           he has there no one/single/one iota/nut of understood  
       b. Hij heeft geen ENkele/ÉÉN/\*Ene vraag begrepen.  
           he has no single/one/one question understood  
           ‘He didn’t understand a single question.’

## II. Negative concord

A number of constructions featuring *geen* exhibit so-called negative concord, that is, the multiple occurrence of negative elements with a single negative interpretation as their combined effect; unlike in cases of double negation, there is no canceling out of negation. These constructions occur in the spoken language only, and some of these may not belong to the standard variety.

A. Niks geen *N*

One case that probably belongs to standard spoken Dutch is illustrated in (230a). Here, *geen* itself is the negator, being modified by the negative pronoun *niks* (the colloquial variant of *niets*, which seems impossible here). Adding *niks* to *geen* has the effect of intensifying the negation, comparable to that achieved by English *at all* in the prose translation. The more “standard” way of realizing this intensification is with the aid of *helemaal* in (230b); cf. Section 7.2.

- (230) a. Dat was niks/\*<sup>?</sup>niets geen leuke tijd.  
           that was nothing/nothing no nice time  
           ‘That wasn’t a particularly nice time at all.’  
       b. Dat was helemaal geen leuke tijd.  
           that was altogether no nice time

Not all instances of *helemaal* intensifying *geen* can be replaced with *niks*, however, as will be clear from the pair in (231). It seems that positive evaluative semantics is essential; either there is a positively evaluative attributive adjective present, like *leuke* in (230), or the head noun itself has an inherent or contextually invokable positively evaluative interpretation; cf. *pretje* ‘fun’ versus *probleem* ‘problem’ in (231).

- (231) a. Dat was helemaal/niks geen pretje.  
           that was altogether/nothing no fun<sub>dim</sub>  
       b. Dat was helemaal/\*niks geen probleem.  
           that was altogether/nothing no problem

#### B. Nooit geen *N*

A highly popular case of negative concord in the non-standard spoken language is given in example (232a). In current normative grammars and style books, the appreciation of this construction varies. Some claim that the two negations always cancel each other out in Standard Dutch and therefore disapprove and/or discourage the use of (231a) on the negative concord reading, and strongly favor the use of the unambiguous construction in (225b). Others, on the other hand, consider the use of negative concord as a normal way of emphasizing negation; for relevant citations, see <http://taaladvies.net/taal/advies/vraag/584/>.

- (232) a. Ik gebruik nooit geen zout.  
           I use never no salt  
           Double negation reading: ‘I never use no salt.’  
           Negative concord reading: ‘I never use any salt.’  
       b. Ik gebruik nooit zout.  
           I use never salt  
           ‘I never use (any) salt.’

The two readings of (232a) are associated with different intonation patterns. The double negation reading is obtained by assigning stress peaks to both *nooit* and (especially) *geen*, as in (233a). In the case of negative concord, on the other hand, there is no significant accent on *geen*, and *nooit* only receives heavy accent when it is used contrastively, as in (233b).

- (233) a. Double negation reading: Ik gebruik NOOIT GEEN zout.  
       b. Negative concord reading: Ik gebruik nooit/NOOIT geen zout.

Other illustrations of the negative concord construction are given in (234a), which are all adapted from actually occurring examples on the internet. Examples (234b-d) show that negative concord is possible for negative elements other than *geen* as well, although it seems *nooit geen* is by far the most widespread case of negative concord.

- (234) a. Ik heb nooit geen zin in seks.  
           I have never no liking in sex  
           ‘I never feel like having sex.’  
       b. Ik ga nooit niet meer in de achtbaan.  
           I go never not anymore in the roller.coaster  
           ‘I will never go in the roller coaster anymore.’

- c. Hij heeft nooit niks om PRO me gegeven.  
 he has never nothing COMP me cared  
 'He never cared about me.'
- d. Chatten is leuk, maar er is bijna nooit niemand.  
 chatting is nice but there is nearly never no.one  
 'Chatting is nice, but there is virtually never someone there.'

### C. (Nog) *geeneens* *geen* *N*

A third context in which *geen* occurs in a negative concord environment is the non-standard exclamative construction in (235a), where *geen* shows up twice; once as the negative quantifier of the noun phrase in object position, and once as a subpart of the formally negative element *geeneens* 'not even'. The second occurrence probably involves a spurious use of *geen*: it alternates with the form in (235b), where the noun phrase is non-negative so that negation must be expressed by *geeneens*. In Standard Dutch (235a) would come out as (235c), where negation is expressed with the aid of *niet eens* 'not even' (lit.: not once). The numbers to the right of examples (235a&b) indicate the number of hits that resulted from a Google search in June 2008 on the sequence within square brackets. The number to the right of (235c) indicates the number of hits for the string [*heb niet eens een*]; we included the verb *hebben* in this search because leaving it out resulted in too much noise in the search result. The general picture resulting from our search will be evident, however.

- (235) a. ... en ik HEB (nog) [*geeneens geen*] auto! [non-standard: 304]  
 b. ... en ik HEB (nog) [*geeneens een*] auto! [non-standard: 22,900]  
 c. ... en ik HEB (nog) [*niet eens een*] auto! [standard: 89,700]  
 ... and I have still not even a car  
 '... and I don't even have a car at all (yet)!'

### III. Evaluative use

The use of *geen* can invoke evaluative semantics on noun phrases that are not otherwise evaluative in nature. This is what happens in (236a&b), where the negation of *leven* 'life' by *geen* results in an interpretation according to which an emphatically negative evaluation is attributed to life, alternatively expressible with the aid of combinations of an adjective and a noun (either compound or phrasal), as in the primed examples.

- (236) a. Dat is toch geen leven! a'. een *rotleven* [compound]  
 that is PRT no life a rotten.life  
 b. Zo heb je toch geen leven! b'. een *vreselijk* leven [phrasal]  
 so have you PRT no life a terrible life

*Geen* phrases of this sort only occur in predicative position or in the complement of *hebben* 'to have'. This can be illustrated by the examples in (237): whereas (237a&b) do have an evaluative interpretation, this is not the case in (237c).

- (237) a. Ik vind dit geen weer!  
 I consider this no weather  
 'I consider this horrible weather'
- b. We hebben weer eens geen weer!  
 we have again once no weather  
 'We are having horrible weather once more.'
- c. <sup>#</sup>Ze voorspellen geen weer!  
 they forecast no weather

A couple more idiomatic examples can be found in (238). Example (238b) differs from the earlier examples in that it involves a positive evaluation: *geen* combines with a substance noun in which the whole noun phrase functions as an idiomatic expression meaning "not a small thing, quite something". Cases like these come pretty close to 'litotes, that is, cases in which negation is used to emphatically express the opposite of what is expressed by the negated element; cf. *Dat is niet niks* 'That is quite something'.

- (238) a. Dat is geen gezicht/porum!  
 that is no sight  
 'That looks ugly, terrible.'
- b. Dat is geen kattenpis.  
 that is no cat.pee  
 'That is not a small thing, quite something.'

#### IV. Degree reading

Measure phrases of time and distance, like *tien minuten* 'ten minutes' in (239a) and *tien kilometer* 'ten kilometers' in (239b), can be combined with *geen* to yield an interpretation which can be paraphrased as "less than X". The adverbial element *nog* is typically present alongside *geen* in such cases, though it seems that it is not strictly necessary in all cases; while in (239a) leaving *nog* out would be awkward, in (239b) it does not seem entirely impossible.

- (239) a. Na nog geen tien minuten brak de hel los.  
 after yet no ten minutes broke the hell loose  
 'After less than ten minutes, hell broke loose.'
- b. Die boerderij ligt nog geen tien kilometer van het stadscentrum.  
 that farmhouse lies yet no ten kilometers from the town center  
 'That farmhouse is less than ten kilometers away from the town center.'

An interpretatively somewhat different case of the same type is given in (240) from the *Woordenboek der Nederlandsche Taal* (item *geen*). Here the combination of *geen* and the numeral *duizend* has an interpretation which can be paraphrased as "not even a thousand".

- (240) Simson deed voor geen duizend Filistijnen onder.  
 Simson did for no thousand Philistines under  
 'Samson was not inferior even to a thousand Philistines.'

### V. Non-negative questions

In many of the examples given above, it seems that the core meaning of *geen* as a negative quantifier is lost. A particular striking illustration of this fact is provided by examples of the type in (241), where accent does not fall on *geen*.

- (241) a. Zijn dat geen courgettes?  
           are that no zucchinis  
           ‘Those are zucchinis, aren’t they?’  
       b. Is dat geen leuk idee?  
           is that no nice idea  
           ‘That is a nice idea, isn’t it?’

That these are not negative questions is evident from the fact that the speaker uttering a question of the type in (241a) anticipates a positive answer. This is explicitly acknowledged in the answer in (242a) by the addition of the adverb *inderdaad* ‘indeed’. A negative answer is of course possible but not anticipated by the speaker, which is clear from the fact that including the adverb *inderdaad* in the reply in (242b) is pragmatically awkward.

- (242) a. Ja, dat zijn inderdaad courgettes.  
           yes that are indeed zucchinis  
       b. Nee, dat zijn (#inderdaad) geen courgettes.  
           no that are indeed no zucchinis

Note, however, that the answer in (242b) with *inderdaad* is only out of place as a reply to (241a) if this question is assigned the prosodic contour typical of questions of this type, with main accent on *courgettes* followed by an acutely rising intonation; there is also a truly negative interpretation for (241a) available, in which *geen* receives heavy accent, for which (242b) with *inderdaad* does count as a pragmatically felicitous reply.

On the intended, non-negative interpretation of the examples in (241), *geen* seems dispensable; the examples in (243) can be used in the same contexts as non-negative (241), and are equally acceptable/felicitous. The main difference seems to be that it is less obvious that the speaker anticipates a positive answer to his question.

- (243) a. Zijn dat courgettes?  
           are that zucchinis  
       b. Is dat een leuk idee?  
           is that a nice idea

We conclude this subsection by pointing out that the negative adverb *niet* exhibits the same behavior as *geen* in that it can show up in non-negative questions. The negative adverb *niet* can be added to (243) to the immediate right of *dat*, with preservation of meaning: *Zijn dat niet courgettes?* or *Is dat niet een leuk idee?*

#### 5.1.5.2. Distribution of *geen* inside the noun phrase

This section discusses the restrictions on the use of *geen* within the noun phrase. We start in Subsection I by considering the question of what types of noun it can modify. After that, we briefly discuss in Subsection II whether *geen* can be

combined with pronouns and proper nouns. Subsection III discusses the co-occurrence restrictions with other elements within the noun phrase.

*I. Geen and noun phrase types*

*Geen* is remarkably flexible when it comes to the types of noun phrase that it can combine with. It is possible for *geen* to combine with count nouns of all genders and numbers. *Geen* can also be construed with non-count nouns. Examples are given in Table 3.

*Table 3: Distribution of geen in noun phrases headed by count/non-count nouns*

|                 | SINGULAR                                    |                                               | PLURAL                                       |
|-----------------|---------------------------------------------|-----------------------------------------------|----------------------------------------------|
|                 | [-NEUTER]                                   | [+NEUTER]                                     |                                              |
| COUNT NOUNS     | <i>geen stad</i><br>no town                 | <i>geen huis</i><br>no house                  | <i>geen steden/huizen</i><br>no towns/houses |
| NON-COUNT NOUNS | <i>geen ellende/wijn</i><br>no misery /wine | <i>geen verdriet/water</i><br>no sorrow/water | n.a.                                         |

Though *geen* can in principle combine with plural count noun phrases, there are restrictions on the use of plurals in combination with *geen*: whereas the plural noun *schepen* ‘ships’ can be used with *geen* in the primeless sentences of (244), this is impossible in the primed examples that feature the more special “not a single” reading of *geen* — this reading requires that the noun is singular, as in (220) above.

- (244) a. Er varen geen schepen op de zee.  
          there sail no ships on the sea  
          ‘There are no ships sailing on the sea.’  
      a’. \*Geen schepen zijn 100% waterdicht.  
          no ships are 100 per cent watertight  
      b. Ik heb daar geen schepen gezien.  
          I have there no ships seen  
          ‘I didn’t see any ships there.’  
      b’. \*Geen schepen levert men 100% waterdicht af.  
          no ships delivers one 100 per cent watertight prt.

The ungrammaticality of the primed examples in (244) matches that of the corresponding cases featuring *geen enkel(e)/één* in (245b); that these examples are unacceptable is not surprising from the point of view of their meaning “not a single”. What is interesting, though, is that *enkel(e)* is compatible with plural noun phrases in other contexts: *enkele schepen* is perfect as the plural counterpart of *een enkel schip* ‘a single ship’. This means that it is not entirely clear what causes the unacceptability of (245b) with *enkel(e)*.

- (245) a. Geen enkel/één schip is 100% waterdicht.  
          no single/one ship is 100 per cent watertight  
      b. \*Geen enkele/één schepen zijn 100% waterdicht.  
          no single/one ships are 100 per cent watertight

There are also many pluralia tantum that cannot be preceded by *geen*, like *tropen* or *Verenigde Staten* in (246a&b). The reason for this lies in the fact that *tropen* and *Verenigde Staten* are always *definite* expressions, with which *geen* cannot be combined. When the *plurale tantum* can be indefinite, like *hersens/hersenen* in (246c&c'), *geen* is possible.

- (246) a. \*geen tropen [cf. de/\*Ø tropen]  
           no tropics  
       b. \*geen Verenigde Staten [cf. de/\*Ø Verenigde Staten]  
           no United States  
       c. Planten hebben geen hersenen.  
           plants have no brains  
       c'. Heb jij geen hersens of zo?!  
           have you no brains or so  
           'Don't you have brains, or what?!'

The acceptability of using *geen* with non-count nouns extends to the cases of bare-stem and GE-nominalizations in (247).

- (247) a. geen werk [bare-stem nominalization]  
           no work  
       b. geen gewerk [GE-nominalization]  
           no work

INF-nominalization like (248a) are generally awkward, although (248b&c) show that there are idiomatic examples involving INF-nominalizations.

- (248) a. ??geen werken [INF-nominalization]  
           no work  
       b. Dat is geen doen.  
           that is no do  
           'That is impossible, unbearable.'  
       c. Er is geen houden meer aan.  
           there is no hold anymore PRT  
           'It cannot be controlled/stopped anymore.'

When we now take a bird's eye view of the noun phrase types with which *geen* can be construed, we find that only a subset can occur with the indefinite article *een* in neutral contexts; *een* does not combine with plurals or non-count nouns (except in the special contexts discussed in Section 5.1.4.2). An approach to *geen* that would hold that it is the result of the fusion of *niet* and the indefinite article *een* would hence fail to cover the entire spectrum of possibilities in the distribution of *geen*. A particularly tough nut to crack for such an analysis of *geen* would be the case in (249), where *geen* combines with an element that does not seem to qualify as nominal at all.

- (249) Het was geen buitenspel.  
       it was no off.side



The expression *buitenspel* ‘offside’ used in sports is a compound originating from a PP headed by *buiten* (lit.: outside (of) play) and it does not show any earmarks of nominalness; for example, it cannot be pluralized or used as the input for diminutivization, nor does it combine with any determiners: *\*de/\*het/\*een buitenspel*. In particular, the fact that *buitenspel* cannot be construed with the indefinite article *een* in any context (not even in exclamatives, which otherwise feature *een* rather profusely: *\*Een buitenspel dat het was!* ‘an offside that it was’) makes a fusion approach to the *geen* found in (249) difficult to uphold. Laxer variants of the fusion analysis which allow *geen* to result from merger of *niet* and the null article  $\emptyset$  as well fare no better in this regard, unless it can be successfully argued that *buitenspel* features the null article.

*Geen* can also combine with the nominal part of verbal N+V collocations of the type illustrated in (250), where the primeless *geen* examples alternate with the primed examples featuring the negative adverb *niet*. There is a tendency to spell the members of the collocation as individual words in the examples with *geen* but as a single word in the examples with *niet*, although all variants can be found on the internet.

- |          |                                                                                |     |                                                                                |
|----------|--------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------|
| (250) a. | Ik kan geen piano spelen.<br>I can no piano play<br>‘I cannot play the piano.’ | a’. | Ik kan niet pianospelen.<br>I can not piano.play<br>‘I cannot play the piano.’ |
| b.       | Ik kan geen auto rijden.<br>I can no car drive<br>‘I cannot drive (a car).’    | b’. | Ik kan niet autorijden.<br>I can not car.drive<br>‘I cannot drive (a car).’    |

Section 5.1.2.3, sub I, has shown that N+V collocations of this type are like particle verbs in the sense that the dependent nominal is obligatorily split off the verbal base when the verb undergoes °verb-second, that is, moves into the second position of the main clause. It seems that in such cases, there is a clear preference to use a noun phrase with *geen*; examples with *geen* occur frequently on the internet, whereas the frequency of examples with *niet* is conspicuously low.

- |          |                                                                      |     |                                                                        |
|----------|----------------------------------------------------------------------|-----|------------------------------------------------------------------------|
| (251) a. | Ik speel geen piano.<br>I play no piano<br>‘I don’t play the piano.’ | a’. | ?Ik speel niet piano.<br>I play not piano<br>‘I don’t play the piano.’ |
| b.       | Ik rijd geen auto.<br>I drive no car<br>‘I don’t drive (a car).’     | b’. | ?Ik rijd niet auto.<br>I drive not car<br>‘I don’t drive (a car).’     |

The same contrast can be observed when the verb is part of a verb cluster and non-adjacent to the noun, as in (252). These facts suggests that N+V collocations are actually ambiguous; when the noun combines with *geen* it functions a regular object, whereas it is part of the verb when it is preceded by *niet*; see Booij (2010:ch.4) for a similar conclusion.

- (252) a. dat ik geen/?niet piano kan spelen.  
           that I no/not piano can play  
           'that I cannot play the piano'  
       b. dat ik geen/?niet auto kan rijden.  
           that I no/not car can drive  
           'that I cannot drive a car.'

This suggestion is further supported by the fact that when the noun is also part of the verb cluster, as in (253), it is *niet* that must be used. Note that in these examples there is again a tendency to spell the collocations as single words.

- (253) a. dat ik niet kan pianospelen.   a'. \*dat ik kan geen piano spelen.  
           that I not can piano.play       that I can no piano play  
           'that I cannot play the piano'  
       b. dat ik niet kan autorijden.   b'. \*dat ik kan geen auto rijden.  
           that I not can car.drive       that I can no car drive  
           'that I cannot drive a car.'

Section 5.1.2.3, sub I, has shown that topicalization of the main verb cannot strand the noun but must pied pipe it. The examples in (254) show that topicalization of the N+V collocation is excluded with *geen* and strands the negative adverb *niet* in its original position. This suggests that the examples in (254) are related to those in (253a&b), in which the N+V collocation behave like a single word, rather than to those in (252) where they are clearly construed independently and the nouns form a constituent with the negative article *geen*.

- (254) a. Pianospelen kan ik niet.       a'. \*Geen piano spelen kan ik.  
           piano.play can I not  
       b. Autorijden kan ik niet.       b'. \*Geen auto rijden kan ik.  
           car.drive can I not

This fact that *geen* forms a syntactic constituent with the nouns *piano/auto* again suggests that *geen* cannot be the result of fusion of *niet* and *een*: nouns like *piano/auto* never feature an indefinite article in N+V collocations, nor are they likely to have a null determiner; they are truly bare nouns, which nonetheless can still be combined with *geen*.

## II. *Geen and personal pronouns and proper nouns*

It is impossible for *geen* to combine directly with personal pronouns; in (255), we have illustrated this for the plural pronouns. An exception must be made, however, for the doubly-primed examples in which *geen* is followed by a case-inflected form of the pronoun. These forms are relics from older stages of the language and belong to the formal register; in present-day Dutch the partitive constructions in the singly-primed examples would be used.

- |          |                             |                                  |                          |
|----------|-----------------------------|----------------------------------|--------------------------|
| (255) a. | *geen wij/ons               | a'. geen van ons                 | a''. \$geen onze         |
|          | no we/us                    | none of us                       | none us <sub>gen</sub>   |
| b.       | *geen jullie/u              | b'. geen van jullie/u            | b''. \$geen uwer         |
|          | no you <sub>pl/polite</sub> | none of you <sub>pl/polite</sub> | none you <sub>gen</sub>  |
| c.       | *geen zij/hen               | c'. geen van hen                 | c''. \$geen hunner       |
|          | no they/them                | none of them                     | none them <sub>gen</sub> |

*Geen* does normally not appear with proper nouns referring to persons, although a somewhat special case was discussed in Section 5.1.2.1, sub III. Nevertheless, geographical proper nouns can sometimes be construed with *geen*, particularly in contexts in which they are premodified by some adjective, as illustrated in the (a)-examples of (256). Another instantiation of the combination of proper nouns with *geen* is formed by the names of languages, as in the (b)-examples of (256). In the (a)-examples *geen* can be replaced with *niet een*, whereas in the (b)-examples only *geen* is possible.

- (256) a. De Denen willen eigenlijk helemaal geen <sup>?</sup>(verenigd) Europa.  
 the Danish want actually altogether no united Europe
- a'. België wil geen <sup>?</sup>(tweede) Italië worden.  
 Belgium wants no second Italy become
- b. Ik spreek geen Züritütsch.  
 I speak no Swiss-German
- b'. Dat is geen Nederlands.  
 that is no Dutch

### III. Restrictions on accompanying determiners and quantificational elements

This section investigates the restrictions that *geen* poses on other elements within the noun phrase, such as determiners, quantificational elements and attributive adjectives.

#### A. Determiners

We can be brief about the distribution of definite articles and demonstrative and possessive pronouns. We have already seen in Section 5.1.5.1.2 that noun phrases containing *geen* are normally indefinite, as is evident, e.g., from the fact illustrated in (257) that they readily occur as the subject in expletive constructions.

- (257) Er staat geen paard in de gang.  
 there stands no horse in the hall

Since *geen* is not possible in definite noun phrases, it will not come as a surprise that *geen* cannot be combined with noun phrases which feature a definite article or a demonstrative/possessive pronoun (changing the order does not affect the judgments).

- (258) a. \*de/die/mijn geen stad/steden  
 the/that/my no town/towns
- b. \*het/dat/mijn geen huis  
 the/that/my no house

It is also impossible for *geen* to combine with noun phrases containing the indefinite article *een*, regardless of whether it precedes or follows *geen*. This would of course follow from the “fusion” approach to *geen* since there are no noun phrases which feature multiple instances of the indefinite article: *\*een een stad* (lit.: an a city). But by essentially the same token, the deviance of (259) also follows from an approach to *geen* as an atomic indefinite quantifier; multiple specification of indefiniteness on a single noun phrase is also impossible: *\*een één of andere stad* and *\*een enige steden* (lit.: a some towns).

- (259)    *\*<een> geen <een> stad*  
               a           no           town

Some speakers report that they allow *geen* to precede noun phrases featuring the indefinite determiner-like elements *dat/dit/zulk soort* ‘that/this/such sort of’, as in (260a). Such examples are, however, extremely rare on the internet: we only found two or three examples with *dit* and *zulk*. We did, however, find substantial numbers of examples like (260b) with *zulke/dergelijke* ‘such’. Examples like these seem to be rejected by speakers of Standard Dutch.

- (260) a.    *%Ik heb helaas geen dat/dit/zulk soort dingen in voorraad.*  
               I have unfortunately no that/this/such sort [of] things in store  
               ‘Unfortunately, I have no such things in store.’  
       b.    *%Ik heb helaas geen zulke/dergelijke dingen in voorraad.*  
               I have unfortunately no such things in store

Of course, the co-occurrence restrictions discussed in this subsection would immediately follow if *geen* is analyzed as an article, and hence competes for the same position occupied by the articles and the demonstrative and possessive pronouns. We have seen in the introduction to this section on *geen*, however, that we should not to jump to conclusions, since *geen* also exhibits various properties of numerals and quantifiers; cf. the discussion of the examples in (204).

### B. Quantifiers and numerals

Apart from the cases in which *geen* seems to act as a degree modifier, discussed in Section 5.1.5.1.3, sub IV, *geen* does not seem to readily combine with numerals, with the exception of cases where some presupposition is denied. So, when someone is accused of having eaten five cakes, he may react by saying something like (261a). A more or less similar construction is given in (261b), which can often be heard in markets.

- (261) a.    *Ik heb geen vijf koeken opgegeten, maar slechts twee!*  
               I have no five cakes prt.-eaten but only two  
               ‘I didn’t eat five cakes; I have had only two.’  
       b.    *Dit alles kost geen tien, geen zeven, geen zes, maar slechts vijf eurootjes!*  
               this all costs no ten, no seven, no six, but only five euros<sub>dim</sub>  
               ‘And all this doesn’t cost ten, seven, or six, but only five euros!’

Quantifiers never co-occur with *geen*. The following examples are all ungrammatical, regardless of the order of *geen* and the quantifier, although

examples like *geen één/enkele* ‘not a single’ may be considered an exception; cf. 5.1.5.1.3, sub I.

- (262) a. \*geen enige ellende  
no some misery  
b. \*geen elke/iedere stad  
no every town  
c. \*geen veel ellende/steden  
no much/many misery/towns  
c'. \*geen weinig ellende/steden  
no little/few misery/towns

*C. Geen preceding attributive adjectives, and inflection*

*Geen* can readily be construed with noun phrases premodified by attributive adjectives. As shown in Section 5.1.5.1.1, sub III, it is even possible for *geen* in examples like (263a) to be semantically associated not with the noun phrase as a whole but just with the adjective. Example (263a) is ambiguous between the two *niet* paraphrases in (263b&c); on the (263b) reading *geen* is semantically construed with the entire noun phrase, while on the interpretation corresponding to (263c) *geen* is semantically associated to the attributive adjective *geringe*.

- (263) a. Dat is geen geringe prestatie.  
that is no insignificant accomplishment  
b. Dat is niet een geringe prestatie.  
that is not an insignificant accomplishment  
c. Dat is een niet geringe prestatie.  
that is a not insignificant accomplishment

Regardless of whether it semantically teams up with the adjective or with the noun phrase as a whole, the distribution of adjectival inflection is determined by the gender features of the head noun in the same way as in indefinite noun phrases headed by the indefinite articles *een/Ø*.

- (264) a. geen/een gering-\*(e) prestatie  
no/an insignificant accomplishment  
b. geen/een gering-\*(e) resultaat  
no/an insignificant result  
c. geen/Ø gering-\*(e) prestaties/resultaten  
no insignificant accomplishments/results

Note that in the singular examples *geen* must be taken to be *syntactically* construed with the noun phrase as a whole, given that count noun phrases like *prestatie* and *resultaat* normally cannot be determinerless: \**Dat is prestatie/resultaat*. Hence, even when *geen* negates only the content of the attributive adjective, it is still a syntactic part of the noun phrase as a whole. This tallies with the fact that *geen* cannot, in fact, form a constituent with an adjective: \**Dat is geen gering* ‘that is no insignificant’.

### 5.1.5.3. The syntactic distribution of (noun phrases containing) *geen*

This section concludes the discussion of *geen* by briefly discussing the syntactic distribution of noun phrases containing *geen*. It also discusses the independent uses of *geen*, that is, cases in which it is not part of a noun phrase.

#### *I. Distribution of noun phrases quantified by geen*

This subsection discusses the syntactic distribution of noun phrases containing *geen*. We will consider whether they occur as arguments (subject, direct object, indirect object, complement of a preposition), as predicates or as adjuncts.

##### *A. Distribution as argument*

A noun phrase quantified by *geen* has a somewhat limited distribution when *geen* has its core meaning of negative quantifier. It may appear as the subject in an expletive construction. Furthermore, it can be used as a direct object, but not as an indirect object; examples like (265c) are pretty awkward.

- (265) a. Er zijn geen eieren meer.  
           there are no eggs anymore  
           ‘We are out of eggs.’  
       b. We hebben nog geen nieuwe eieren gekocht.  
           we have yet no new eggs bought  
           ‘We did not buy any new eggs yet.’  
       c. <sup>??</sup>Ik heb geen studenten mijn boek geleend.  
           I have no students my books lent

Using a noun phrase with *geen* as the complement of a preposition gives rise to an unacceptable result: the negation must be expressed by the negative adverb *niet*.

- (266) a. Ik hou niet van bloemencorso’s.  
           I love not of flower.shows  
           ‘I do not like flower shows.’  
       b. \*Ik hou van geen bloemencorso’s.  
           I love of no flower.shows

On the more special meanings of *geen* the restrictions seem to be lifted. This is illustrated in the examples in (267) for noun phrases expressing the “not a single” reading. These examples show that such noun phrases need not occur in the expletive construction, can readily occur as indirect object, and can even be used as the complement of a preposition.

- (267) a. Geen (enkel) huis was meer te koop.  
           no single house was anymore for sale  
       b. Ze hebben nog geen (enkel) huis gezien.  
           they have yet no single house seen  
       c. Ik heb geen (enkele) student een boek geleend.  
           I have no single student a book lent  
       d. Ze willen in geen (enkel) huis wonen.  
           they want in no single house live

Haeseryn et al. (1997: 1657) notice that *geen*-phrases may also occur as the complement of a preposition in certain idiomatic constructions. These all involve a more or less emphatic negation. Some examples, taken from Klooster (2001b) are given in (268).

- (268) a. Hij is in geen velden of wegen te zien.  
 he is in no fields or roads to see  
 'He is nowhere to be seen.'
- b. Dit is voor geen mens te begrijpen.  
 this is for no person to understand  
 'This is completely unintelligible.'
- c. Die ellende valt met geen pen te beschrijven.  
 that misery falls with no pen to describe  
 'That misery is incredible/is impossible to describe.'

### *B. Distribution as predicate*

A *geen* phrase can be used as a nominal predicate when it is used with its core reading. This is illustrated in (269) with examples of the copular and *vinden* construction. We have not been able to find or construct examples for *geen* phrases with a "not a single" reading.

- (269) a. Jan is echt geen aansteller.  
 Jan is really no poser  
 'Jan is truly not a poser.'
- b. Ik vind Jan echt geen aansteller.  
 I consider Jan really no poser  
 'I truly do not consider Jan a poser.'

*Geen* phrases in non-negative questions, discussed in 5.1.5.1.3, sub V, are restricted to the function of predicate. Some examples are given in (270).

- (270) a. Is Jan geen aansteller?  
 is Jan no poser  
 'Isn't Jan a poser?'
- b. Vind je Jan geen aansteller?  
 consider you Jan no poser  
 'Don't you consider Jan to be a poser?'

### *C. Distribution as adjunct*

The degree reading of *geen* in (239), in which *geen* is construed with a numeral following it and means something like "less than", is particularly common in adverbial phrases. Example (239a) is repeated here as (271a). Example (271b) shows that *geen* phrases can also readily be used as nominal adjuncts on their "not a single" reading. In these constructions, main accent is falling on the element immediately following *geen*, that is, the numeral in (271a) and the head noun in (271b). *Geen* phrases in which *geen* receives prosodic prominence are difficult to construe as adjuncts.

- (271) a. Na nog geen tien minuten brak de hel los.  
 after yet no ten minutes broke the hell loose  
 'After less than ten minutes, hell broke loose.'
- b. Ik had er geen seconde over nagedacht.  
 I had there no second about prt.-thought  
 'I hadn't thought about it for a (single) second.'

## II. Distribution of *geen* as an independent constituent

This subsection is concerned with the use of *geen* external to the noun phrase, that is, we now turn to an inspection of its use as an independent syntactic constituent (argument, predicate and adjunct), as well as its use as °floating quantifier.

### A. Distribution as argument

*Geen* does not readily occur independently in argument positions. Examples (272a) shows, however, that there is a contrast between the cases with singular and plural agreement, the former being better than the latter. In order to express the intended meaning, Dutch can resort to two strategies: one is to add the numeral *één* 'one' or *enkele* 'single' to the right of *geen*, as in (272b); the other is to use a partitive construction, as in (272c). In both cases, agreement between the subject and the finite verb is necessarily singular.

- (272) • Discourse topic: applicants for a job
- a. Geen <sup>?</sup>komt/\*komen in aanmerking voor de baan.  
 no comes/come in consideration for the job  
 'None is eligible for the job.'
- b. Geen één/enkele komt in aanmerking voor de baan.  
 no one/single comes in consideration for the job  
 'Not a single one is eligible for the job.'
- c. Geen van hen komt in aanmerking voor de baan.  
 none (of them) comes in consideration for the job  
 'None (of them) is eligible for the job.'

### B. Distribution as predicate and adjunct

In present-day Dutch *geen* cannot be used as a predicate (which was possible in earlier stages of the language): examples like (273a) are unacceptable. Note that (273b) is not a counterexample; this example involves °quantitative *er*, which is associated with the interpretative gap within a noun phrase containing *geen*. Given that adjuncts are also predicates, the impossibility of example (273a) automatically precludes adjunct construal of *geen*.

- (273) a. \*Dit is geen.  
 this is none
- b. Dit is er [geen [e]].  
 this is ER no



*C. Distribution as floating quantifier*

Example (274a) show that neither *geen* nor *geen één/enkele* can be used as a floating quantifier. The partitive noun phrase *geen van alle/beide* in (274b), on the other hand, can be used in this way. As usual, the floating quantifier must follow its associate, as in (274b), unless it is placed in clause-initial position, as in (274b'). When the associate has human reference, as in (275), Dutch orthography requires a plural ending *-n* on the quantifier.

- (274) a. \*Ik heb ze nog geen (één/enkele) gelezen. [Discourse topic: books]  
           I have them yet no one/single read  
       b. Ik heb ze geen van alle/beide gelezen.  
           I have them none of all/both read  
       b'. Geen van alle/beide heb ik ze gelezen.
- (275) a. \*Ik heb ze nog geen (één/enkele) ontmoet. [Discourse topic: people]  
           I have them yet no one/single met  
       b. Ik heb ze nog geen van allen/beiden ontmoet.  
           I have them yet none of all/both met  
       b'. Geen van allen/beiden heb ik ze ontmoet.

In a similar way, *geen* can also be used as a floating quantifier in partitive constructions with numerals (Paardekooper 1986: 472). The numerals in these constructions always take the ending *-en* in written language, regardless of the kind of entity referred to. This is illustrated in (276).

- (276) a. Ik heb ze nog geen van tweeën gelezen.  
           I have them yet none of two read  
       b. Ik heb ze nog geen van drieën gezien.  
           I have them yet none of three seen

**5.2. Pronouns**

This section discusses the second group of determiners: the pronouns. Before we embark upon a detailed discussion of the pronominal types, we want to make some general remarks on the classification of the pronouns. In most Dutch traditional grammars, the pronouns are divided into the subclasses given in (277); see Haeseryn et al. (1997: ch.5).

- (277) a. Personal pronouns, e.g., *ik* 'I' and *mij* 'me'  
       b. Reflexive/reciprocal pronouns, e.g., *zichzelf* 'himself' and *elkaar* 'each other'  
       c. Possessive pronouns, e.g., *mijn* 'my'  
       d. Demonstrative pronouns, e.g., *dit* 'this' and *dat* 'that'  
       e. Interrogative pronouns, e.g., *wie* 'who', *wiens* 'whose' and *welke* 'which'  
       f. Relative pronouns, e.g., *die* 'that' and *dat* 'that'  
       g. quantificational pronouns, e.g., *iemand* 'someone' and *sommige* 'some'  
       h. Exclamative pronoun: *wat*

The classification in (277) is unsatisfactory for the reason that there are various elements that could in principle be part of more than one subclass. This is very clear

when we consider the set of interrogative pronouns: this class is assumed to contain the pronouns *wie* ‘who’, *wiens* ‘whose’ and *welk* ‘which’ based on the semantic criterion that they are all interrogative words. However, it seems equally justifiable on formal grounds to say that *wie* ‘who’ is a personal, *wiens* ‘whose’ is possessive, and *welk* ‘which’ is a demonstrative pronoun.

Of course, making a classification on the basis of semantic considerations is not objectionable, provided that it is done in a consistent way. However, traditional grammar fails in this respect by, e.g., including adverbs like *wanneer* ‘when’ and *hoe* ‘how’ not in the class of interrogative elements, but simply in the class of adverbs. This results in a classification in which certain elements could be considered to belong to more than one subclass, and some classes fail to include all relevant elements. Another example is the subclass of “indefinite” pronouns, in which Haeseryn et al. (1997) include not only pronominal quantifiers like *iemand*, but also quantificational elements like *sommige* ‘some’ which seem more related to a numeral like *drie* ‘three’ than to the pronouns.

It seems that these problems are caused by the fact that traditional classification is based on a mixture of syntactic and semantic criteria; cf. Broekhuis (2002). In order to avoid these problems, or at least to make them visible, it seems better to apply the syntactic and semantic criteria in a more consistent way. A first attempt is given in Table 4.

Table 4: Main types of pronouns

|                                                       |                   |                                                                          |
|-------------------------------------------------------|-------------------|--------------------------------------------------------------------------|
| ARGUMENT:<br>PERSONAL<br>PRONOUNS                     | REFERENTIAL       | <i>Hij is ziek.</i> ‘He is ill.’                                         |
|                                                       | INTERROGATIVE     | <i>Wie is ziek?</i> ‘Who is ill?’                                        |
|                                                       | QUANTIFICATIONAL  | <i>Iedereen is ziek.</i> ‘Everyone is ill.’                              |
|                                                       | RELATIVE          | <i>de man die ziek is</i> ‘the man who is ill’                           |
|                                                       | REFLEXIVE         | <i>Jan wast zichzelf.</i> ‘Jan is washing himself.’                      |
|                                                       | RECIPROCAL        | <i>Zij wassen elkaar.</i> ‘They wash each other.’                        |
| MODIFIER:<br>POSSESSIVE<br>PRONOUNS                   | REFERENTIAL       | <i>Zijn kat is ziek.</i> ‘His cat is ill.’                               |
|                                                       | INTERROGATIVE     | <i>Wiens kat is ziek?</i> ‘Whose cat is ill?’                            |
|                                                       | QUANTIFICATIONAL  | <i>Iemands kat is ziek.</i> ‘Someone’s cat is ill.’                      |
|                                                       | RELATIVE          | <i>de jongen wiens kat ziek is</i><br>‘the boy whose cat is ill’         |
|                                                       | RECIPROCAL        | <i>Zij verzorgen elkaars kat.</i><br>‘They look after each other’s cat.’ |
| ARGUMENT OR<br>MODIFIER:<br>DEMONSTRATIVE<br>PRONOUNS | NON-INTERROGATIVE | <i>Die (kat) is ziek.</i><br>‘That cat is ill.’                          |
|                                                       | INTERROGATIVE     | <i>Welke (kat) is ziek?</i><br>‘Which cat is ill?’                       |

A first division is made on the basis of the syntactic relations that these pronouns enter into: Are they used as independent arguments or as dependent modifiers of the noun phrase? On basis of this formal, syntagmatic criterion the pronouns can be divided into the three main groups in (278). This division seems to be partially reflected by the semantics of the pronouns: whereas the personal and possessive pronouns display a limited amount of descriptive content, such as the ability to

express that their referent is human or female, the demonstrative pronouns seem to lack such descriptive content; the latter are mainly deictic elements that enable the addressee to determine the referent of the noun phrase they modify.

- (278) a. Personal pronouns: pronouns used as arguments  
 b. Possessive pronouns: pronouns used as modifiers of a noun phrase  
 c. Demonstrative pronouns: pronouns used either as arguments or as modifiers of a noun phrase

The three groups in (278) can be divided into smaller subcategories based on semantic criteria, such as whether the pronouns are referential, interrogative or quantificational, or whether their reference is dependent on an antecedent, as is the case with the relative, reflexive and reciprocal pronouns. Given that demonstrative pronouns have virtually no descriptive content, it will not come as a surprise that they do not have as many semantic subclasses as the other two main types. Note in passing that these semantic criteria can also be applied to, e.g., adverbial phrases.

The following subsections will discuss the three main classes of pronouns shown in Table 4: the personal pronouns are discussed in Section 5.2.1, the possessive pronouns in Section 5.2.2, and the demonstrative pronouns in Section 5.2.3.

### *5.2.1. Personal pronouns*

This section discusses pronouns that are used as arguments only, the personal pronouns. Not all semantic subclasses of personal pronouns will be extensively discussed here. For example, we can discuss the relative pronouns in a more natural way in relation to the syntactic context in which they are found, relative clauses; we therefore refer the reader to Section 3.3.2.2 for a more exhaustive discussion of these pronouns.

#### *5.2.1.1. Referential personal pronouns*

This section will discuss the referential personal pronouns. Section 5.2.1.1.1 will start by providing an overview of the different forms of these pronouns, followed in 5.2.1.1.2 by a brief discussion of the ways in which they are assigned an interpretation. Section 5.2.1.1.3 will discuss the role of the nominal features person, number and gender, followed in Sections 5.2.1.1.4 and 5.2.1.1.5 by a more extensive discussion of the subject and object forms, and the conditions on the use of the strong and weak forms.

##### *5.2.1.1.1. The paradigm*

Personal pronouns are sensitive to the nominal features number, person and gender, which were discussed in Section 1.1.1, but this does not suffice to give a complete classification of these pronouns; other criteria are also involved. A first division of the pronouns can be made by appealing to number and person: all pronouns have a singular and a plural form and are marked as either first, second or third person. The third person pronouns are further divided into three groups on the basis of gender: masculine, feminine and neuter. In order to come to a full classification we must appeal to three additional distinctions. First, a distinction must be made between

two case forms of the pronouns: the (nominative) subject and the (accusative/dative) object form. Second, a distinction must be made between the STRONG (phonetically non-reduced) and WEAK (phonetically reduced) form of the pronoun. Finally, a distinction must be made between the regular and the polite form of the second person pronouns. The full set of personal pronouns is given in Table 5.

Table 5: Referential Personal pronouns

|                        |           | SINGULAR    |            |              |              | PLURAL        |           |                          |           |
|------------------------|-----------|-------------|------------|--------------|--------------|---------------|-----------|--------------------------|-----------|
|                        |           | SUBJECT     |            | OBJECT       |              | SUBJECT       |           | OBJECT                   |           |
|                        |           | strong      | weak       | strong       | weak         | strong        | weak      | strong                   | weak      |
| 1 <sup>ST</sup> PERSON |           | <i>ik</i>   | <i>'k</i>  | <i>mij</i>   | <i>me</i>    | <i>wij</i>    | <i>we</i> | <i>ons</i>               | —         |
| 2 <sup>ND</sup> PERSON | REGULAR   | <i>jij</i>  | <i>je</i>  | <i>jou</i>   | <i>je</i>    | <i>jullie</i> | —         | <i>jullie</i>            | —         |
|                        | POLITE    | <i>u</i>    |            | <i>u</i>     |              | <i>u</i>      |           | <i>u</i>                 |           |
| 3 <sup>RD</sup> PERSON | MASCULINE | <i>hij</i>  | <i>-ie</i> | <i>hem</i>   | <i>'m</i>    | <i>zij</i>    | <i>ze</i> | <i>hen<sub>acc</sub></i> | <i>ze</i> |
|                        | FEMININE  | <i>zij</i>  | <i>ze</i>  | <i>haar</i>  | <i>(d)'r</i> |               |           | <i>hun<sub>dat</sub></i> |           |
|                        | NEUTER    | <i>?het</i> | <i>'t</i>  | <i>*?het</i> | <i>'t</i>    |               |           |                          |           |

The polite form *u* behaves syntactically as a third person singular pronoun. This will become clear from the examples in (279). The (a)-examples show that the singular second person pronoun *jij/je* may trigger a *-t* ending on the finite verb in the present tense, but only when it precedes it; when it follows it the ending is zero. The polite form *u*, on the other hand, patterns with the singular third person pronouns in that it always triggers the *-t* ending. Furthermore, it never combines with a plural verb: \**U komen morgen toch ook?* For more evidence, see Section 5.2.1.5, sub I.

- (279) a. *Jij/Je kom-t morgen toch ook?*  
 you come tomorrow PRT. too  
 'You will come too tomorrow, won't you?'  
 a'. *Kom-Ø jij/je morgen ook?*  
 come you tomorrow too  
 'Will you come too, tomorrow?'  
 b. *U/Hij kom-t morgen toch ook?*  
 you/he come tomorrow PRT. TOO  
 'You/He will come too tomorrow, won't you/he?'  
 b'. *Kom-t u/hij morgen ook?*  
 come(s) you/he tomorrow too  
 'Will you/he come too, tomorrow?'

In addition to the forms in Table 5, there is the [+HUMAN] pronoun *men* 'one', which can only be used as the subject of a finite clause. The examples in (280) show that this pronoun is used when the speaker is not able (or willing) to properly identify the referent of the subject, or when he wants to give a general statement. The inflection on the finite verbs shows that *men* is formally a third person singular pronoun, and the fact that the possessive *zijn* 'his' in (280b) can take *men* as its antecedent shows that the latter is formally masculine or neuter.

- (280) a. Men zegt dat hij gestorven is.  
           one says that he died is  
           ‘Rumors are saying that he has died.’  
       b. Men<sub>i</sub> is zijn<sub>i</sub> leven niet zeker in deze stad.  
           one is his life not sure in this city  
           ‘One is jeopardizing one’s life in this city.’

The pronoun *men* is somewhat formal and mainly used in writing. In speech, there are two alternatives for (280a) that enable the speaker to conceal the identity of the source of information: either the weak plural pronoun *ze* ‘they’ in (281a) is used, or the passive construction in (281a’). General statements like (280b) are normally expressed by using the weak singular second person pronoun *je* ‘one’, as in (281b).

- (281) a. Ze zeggen dat hij gestorven is.  
           they say that he died is  
           ‘Rumors are saying that he has died.’  
       a’. Er wordt gezegd dat hij gestorven is.  
           there is said that he died is  
           ‘It is said that he is dead.’  
       b. Je<sub>i</sub> bent je<sub>i</sub> leven niet zeker in deze stad.  
           you are your life not sure in this city  
           ‘One is jeopardizing one’s life in this city.’

Finally, it can be noted that although the feminine pronoun *haar* is normally singular it is sometimes also used as a plural pronoun it is sometimes also used as a plural pronoun in partitive construction of the type *sommigen van haar* ‘some of them’. This option is not available for the masculine pronoun *hem*.

#### 5.2.1.1.2. *Interpretation*

Referential personal pronouns are normally used when the speaker assumes that the addressee is able to identify the intended referent without the aid of a noun phrase with more descriptive content. In order to establish the referent, the addressee can use clues from both the linguistic and the non-linguistic context. At least the following three subcases can be distinguished. We will conclude with a brief remark on so-called impersonal *het*.

##### 1. *Deictic pronouns*

We can speak of deictic use of the referential pronoun when its referent set is determined by the non-linguistic situation in which the sentence is uttered. The first and second singular pronouns *ik* ‘I’ and *jij* ‘you’ are typically used in this way as they refer to, respectively, the speaker and the addressee. The plural pronouns *wij* ‘we’ and *jullie* ‘you’ can also be used deictically, in which case they refer to a group of people present at the time of utterance: *wij* refers to a group of people including the speaker (and possibly the addressee) and *jullie* to a group of people including the addressee (but not speaker). The deictic use of third person pronouns is generally accompanied by some gesture, or more specific linguistic information that will enable the addressee to select the intended entity or individual.

- (282) a. Zij is Marie. [pointing at the person in question]  
           she is Marie  
           ‘She is Marie.’  
       b. Zij daar bij die deur is Marie.  
           she over-there near that door is Marie

## II. Anaphoric pronouns

We can speak of anaphoric use of the referential personal pronoun when the situation in which the sentence is uttered does not enable the addressee to establish the intended referent, but more information is needed about the activated domain of discourse (domain D). This information may be part of the shared knowledge of the speaker and the addressee. So, the referent set of the plural pronoun *wij* ‘we’ may vary with the activated domain of discourse: when domestic issues are being discussed, *wij* may refer to the speaker and his family, in a commercial setting it may refer to the speaker and the company he is affiliated to, and when discussing some incident in the pub, it may refer to the speaker and his friends. And, of course, something similar holds for the plural pronoun *jullie* ‘you’.

Sometimes anaphoric pronouns are modified in order to enable the addressee to establish the intended referent set of the pronoun. Some typical examples, adapted from the internet, are given in (283). Note that the pronoun cannot appear in its reduced form in these cases.

- (283) a. Wij thuis kijken enkel nog naar het nieuws.  
           we home look only PRT. at the news.bulletin  
           ‘At home, we are only watching the news bulletin.’  
       b. Wij van Sollicitatieleed.nl zijn blij met deze aandacht.  
           we from Sollicitatieleed.nl are happy with this attention  
       c. Wij Nederlanders hebben altijd te klagen.  
           we Dutchmen have always to complain  
           ‘We, the Dutch, always complain about something.’

The referent set of the plural pronouns *wij* and *jullie* may also be established by the preceding linguistic contexts. When the speaker is telling a story about Marie and himself, the speaker can refer to this discourse topic by means of the pronoun *wij*. And naturally, when the addressee takes over, he will use the pronoun *jullie* to refer to the same discourse topic. This is shown in (284a). Third person referential personal pronouns are often used in this anaphoric way; one typical example is given in (284b).

- (284) a. [participant A] Marie en ik waren gisteren in het theater en we hebben daar *Op hoop van zegen* van Heijermans gezien. [participant B] Vonden *jullie* het leuk?  
           [participant A] Marie and I were in the theater yesterday and we saw *Op hoop van zegen* by Heijermans there. [participant B] Did you<sub>pl</sub> like it?  
       b. Heb je *mijn boek* bij je? Ik heb *het* nodig.  
           have you my book with you. I have it need  
           ‘Did you bring my book? I need it.’

*III. Bound pronouns*

A referential personal pronoun is bound when it has a °c-commanding antecedent in the same sentence. The pronouns typically occur in their weak (phonologically reduced) form in these cases. Consider the examples in (285), where the available interpretations of the pronouns are indicated by means of indices.

- (285) a. Jan<sub>i</sub> kletste terwijl hij<sub>\*i/j</sub> in de hal wachtte.  
 Jan chattered while he in the hall waited  
 'Jan was chattering while he (= some other person) was waiting in the hall.'
- a'. Jan<sub>i</sub> kletste terwijl-ie<sub>i/j</sub> in de hal wachtte.  
 Jan chattered while-he in the hall waited  
 'Jan was chattering while he (= Jan/some other person) was waiting in the hall.'
- b. Jan<sub>i</sub> zei dat ik dat boek aan hem<sub>\*i/j</sub> moest geven.  
 Jan said that I that book to him must give  
 'Jan said that I had to give the book to him (= some other person).'
- b'. Jan<sub>i</sub> zei dat ik dat boek aan 'm<sub>i/j</sub> moest geven.  
 Jan said that I that book to him must give  
 'Jan said that I had to give the book to him (= Jan/some other person).'

In example (285a) the strong pronoun *hij* 'he' can only be used to refer to some contextually determined person. This is also possible in (285a') with the reduced pronoun *-ie*, but in addition this example allows a reading in which the noun phrase *Jan* functions as the antecedent of the pronoun, which is indicated by co-indexing the two noun phrases. Something similar hold for the object pronouns in the (b)-examples: the strong pronoun *hem* is preferably construed as referring to some contextually determined person (although it seems possible to override this by assigning contrastive stress to the pronoun), whereas the weak pronoun *'m* can readily be construed as coreferential with the subject of the matrix clause. In the examples in the remainder of the discussion we will no longer indicate whether the pronoun is weak or strong.

Example (286a) shows that °binding opens new interpretation possibilities for the pronoun when we are dealing with universally quantified antecedents. In this example, the universally quantified pronoun *iedereen* 'everyone' and the referential personal pronoun are part of the same sentence. This sentence allows two readings: one in which the personal pronoun refers to some contextually determined person, and one in which it refers to the people chattering. The latter reading is often referred to as the BOUND VARIABLE READING since the pronoun behaves as a variable bound by the quantifier *iedereen* 'everyone'. A more or less formal representation of this reading is given in (286b), where the referential pronoun is represented by the second variable *x*.

- (286) a. Iedereen<sub>i</sub> kletste, terwijl hij<sub>i/j</sub> wachtte in de hal.  
 everyone chattered while he waited in the hall  
 'Everyone was chattering while he was waiting in the hall.'
- b.  $\forall x$  [Person(*x*)  $\rightarrow$  Chatter(*x*) & Wait in the hall(*x*)]

The BOUND VARIABLE READING does not arise when the universally quantified expression and the referential pronoun are in separate sentences; in examples like

(287a) the referential personal pronoun *hij* can only refer to some contextually determined person. We can refer to the people chattering by using the plural pronoun *zij* as in (287b), but this will not give rise to the bound variable reading; the plural pronoun will refer to the people chattering as a group.

- (287) a. Iedereen<sub>i</sub> kletste. Ondertussen wachtte hij<sub>\*i/j</sub> in de hal.  
 everyone chattered in.the.meantime waited he in the hall  
 'Everyone was chattering. In the meantime he waited in the hall.'
- b. Iedereen<sub>i</sub> kletste. Ondertussen wachtten zij<sub>\*i/j</sub> in de hal.  
 everyone chattered in.the.meantime waited they in the hall  
 'Everyone was chattering. In the meantime they waited in the hall.'

The bound variable reading in (286b) requires that the quantifier c-command the referential pronoun: this predicts not only that the two pronouns in (286a) cannot be swapped but also that the quantifier cannot be embedded in, e.g., the subject of the matrix clause. That these predictions are correct is shown by the fact that the two examples in (288) do not allow a bound variable reading, that is, the referential personal pronoun can only refer to some contextually determined person.

- (288) a. Hij<sub>\*i/j</sub> kletste, terwijl iedereen<sub>i</sub> wachtte in de hal.  
 he chattered while everyone waited in the hall  
 'He was chattering while everyone was waiting in the hall.'
- b. De wens van iedereen<sub>i</sub> was dat hij<sub>\*i/j</sub> zou vertrekken.  
 the wish of everyone was that he would leave  
 'Everyone's wish was that he would leave.'

The bound variable reading is also excluded when the quantifier and the referential pronoun are too close to each other: they are not allowed to be co-arguments, and as a result the referential pronoun in (289a) can only refer to some contextually determined person. This constraint need not surprise us given that referential pronouns can never be bound by a co-argument: binding of co-arguments is only possible when we replace the referential pronoun by a reflexive one; see Section 5.2.1.5, sub III for more discussion.

- (289) a. Iedereen<sub>i</sub> bewondert hem<sub>\*i/j</sub>.  
 everyone admires him
- b. Jan<sub>i</sub> bewondert hem<sub>\*i/j</sub>.  
 Jan admires him

#### *IV. Impersonal het*

Whereas most pronouns are normally used with a clear referential function, the third person singular neuter pronoun may sometimes lack such reference. This is typically the case in "weather" contexts like (290).

- (290) a. Het regent/is koud.  
 it rains/is cold
- b. Ik heb het koud.  
 I have it cold  
 'I'm cold.'



- Another typical non-referential use is the use of *het* as an °anticipatory pronoun, that is, in its syntactic function of “place-holder” of a sentential complement. Given that *het* triggers °R-pronominalization when it functions as the complement of a preposition, it does not come as surprise that the pronominal part of the PP *er ... P* has a similar impersonal use.

- What the examples above have in common is that none of the occurrences of *het* can be replaced by a noun phrase or some other pronoun.

This section focuses on the role of the nominal features person, number and gender.

As was already discussed in 5.2.1.1.2, the singular first person pronoun is used to refer to the speaker, the plural one to refer to a referent set including the speaker (and possibly the addressee). The singular second person pronoun is used to refer to the addressee, the plural one is used when there is more than one addressee, or to refer to a referent set including the addressee (but not the speaker). Third person pronouns always exclude the speaker and addressee. Table 6 illustrates this for the subject pronoun; the elements between square brackets indicate whether the reference set indicate the speaker(s) [1], the addressee [2] or entities that are neither speaker nor addressee [3]. The plural first person pronoun *wij* is often called inclusive when it also refers to the addressee, and as exclusive when the addressee is not included.

|            | SINGULAR         |     | PLURAL                                                                                    |                       |
|------------|------------------|-----|-------------------------------------------------------------------------------------------|-----------------------|
| 1ST PERSON | <i>ik</i> 'I'    | [1] | <i>wij</i> 'we' (exclusive)<br><i>wij</i> 'we' (inclusive)<br><i>wij</i> 'we' (exclusive) | [1]<br>[1,2]<br>[1,3] |
| 2ND PERSON | <i>jij</i> 'you' | [2] | <i>jullie</i> 'you'                                                                       | [2] or [2,3]          |

|            |                                |     |                   |     |
|------------|--------------------------------|-----|-------------------|-----|
| 3RD PERSON | <i>hij/zij/het</i> 'he/she/it' | [3] | <i>zij</i> 'they' | [3] |
|------------|--------------------------------|-----|-------------------|-----|

The conventions regulating the regular and the polite forms of the second person pronouns are subjected to subjective, social and regional variation. Generally speaking, the use of the polite form reflects a difference in social status or age, but it may also reflect a lack of intimacy. In certain southern varieties of Dutch, the form *gij/ge* is used as the subject form of the second person (singular and plural) pronoun, and *u* as the regular object form; in other varieties of Dutch the form *ge* is felt as archaic; cf. Haeseryn et al. (1997: 243ff.).

## II. Third person pronouns

The traditional view is that singular third person pronouns are sensitive to the gender of their antecedent: normally, the masculine pronoun is used when the noun denoting the set containing the intended referent of the pronoun is also masculine, and the same thing holds for the feminine and neuter pronouns. It must be noted, however, that for many, especially northern speakers the distinction between masculine and feminine nouns is on the decline, so that masculine pronouns are often used where, according to the dictionary, only a feminine pronoun would be appropriate. This means that other factors are involved in determining the choice of the gender features of the pronoun.

The examples in (293) show that considerations of sex may overrule considerations of syntactic gender. Although the noun *meisje* in (293a) takes the article *het*, and is therefore formally a neuter noun, most speakers would find it weird to use the neuter pronoun *het* to refer back to it; the feminine pronoun *zij* 'she' is the one normally used. Similarly, despite the fact that the noun phrase *de huisarts* 'the GP' in (293b) is headed by a masculine noun, the feminine pronoun *zij* can be felicitously used provided that the participants in the discourse know that the referent of the noun phrase is a woman.

- (293) a. Het meisje was ernstig ziek, maar ze/\*het was gelukkig  
 the girl was seriously ill but she/it was fortunately  
 buiten levensgevaar.  
 outside peril of death  
 'The girl was seriously ill, but she was fortunately not in peril of death.'
- b. Ik ben bij de huisarts geweest en hij/zij zei dat alles goed was.  
 I am with the GP been and he/she said that everything well was  
 'I have been to the doctor and he/she said that everything was ok.'

Other factors may be relevant as well. For example, there seems to be a tendency, both in speech and in writing, to refer to institutional bodies by means of feminine pronouns, even when the noun is neuter; cf. Haeseryn (1997:162) and De Vos (2009). An example of this sort is found in (294).

- (294) Gisteren is *het* bestuur<sub>[+neuter]</sub> samengekomen. *Zij* heeft besloten dat ...  
 yesterday is the board prt.-assembled. She has decided that  
 'Yesterday, the board assembled. It decided that ...'

Furthermore, corpus research by Audring (2009) has shown that, at least in colloquial speech, pronouns are used as indicated in (295). This shows that the system in which pronoun and their antecedents must exhibit syntactic agreement is gradually replaced by a system, in which the gender of the pronoun is determined by certain semantic properties of the antecedent.

- (295) • Semantic restrictions on the use of singular pronouns in speech
- Feminine pronouns: female persons and animals.
  - Masculine pronouns: male persons, all animals (including animals of female sex), countable, bounded objects and specific abstract entities.
  - Neuter pronouns: mass nouns and uncountable, unbounded object, unspecific abstract entities.

The plural third person pronoun is normally used when it refers back to a plural noun phrase. However, when a singular noun phrase is headed by a collective noun referring to a set, as with mass nouns like *politie* or collective nouns like *groep* ‘group’, it is also common to use the plural pronoun. This shows, again, that the syntactic agreement system is gradually replaced by a more semantically based system

- (296) a. De politie is daar binnengevallen en ze hebben vijf mensen gearresteerd.  
the police is there prt.-entered and they have five people arrested  
‘The police have entered there and they arrested five people.’
- b. Er komt een groep demonstranten aan. Ze scanderen leuzen.  
there comes a group [of] protesters prt. they chant slogans  
‘A group of protesters is approaching. They are chanting slogans.’

#### 5.2.1.1.4. *Subject and object forms*

In Standard Dutch, case distinctions are only visible on the referential personal and possessive pronouns: the subject and object forms can be considered to represent, respectively, the nominative and the accusative/dative form of the referential personal pronouns. The possessive pronouns in Table 10 in Section 5.2.2 represent the genitive forms.

- (297) a. *Ik* kuste Peter. [nominative]  
I kissed Peter
- b. Peter kuste *mij*. [accusative]  
Peter kissed me
- c. Peter gaf *mij* een kus. [dative]  
Peter gave me a kiss
- d. *mijn* kus [genitive]  
my kiss

The examples in (297b&c) show that accusative and dative forms are normally not distinguished in Dutch. The only exceptions are the strong third person plural pronouns, where an artificial distinction was introduced in the 17<sup>th</sup> century between a dative form *hun* ‘them’ and an accusative form *hen* ‘them’. This distinction is still made by some, especially in writing, although most speakers use the two object

forms as free alternates. According to the normative rule, *hun* can only be used as a nominal indirect/dative object (and as a possessive pronoun), whereas *hen* is used in all other cases. In (298), the forms that are excluded by this rule are marked with a number sign. For more discussion and examples, we refer the reader to [www.onzetaal.nl/advies/hunhen.php](http://www.onzetaal.nl/advies/hunhen.php).

- (298) a. Ik ontmoet hen/#hun morgen.  
           I meet them tomorrow  
       b. Ik geef hun/#hen dat boek.  
           I give them that book  
       c. Ik geef het boek aan hen/#hun.  
           I give the book to them

Despite normative pressure, the use of the pronoun *hun* as subject pronoun is fairly common in order to refer to [+HUMAN] referents; cf. Van der Wal & Van Bree (2008:414). Thus, an example like (299) can be used to refer to a number of friends of the speaker but not to a set of books that he has ordered. Since *hun* normally also refers to human (or animate) antecedents when used as an object pronoun or complement of a preposition, it has been suggested that it is developing into an omnipurpose third person, plural, [+HUMAN] pronoun; cf. Van Bergen et al. (2010).

- (299) a. %Hun komen morgen.  
           they<sub>[+human]</sub> come tomorrow  
           ‘They will be here tomorrow.’

Given that the distinction between accusative *hen* and dative *hun* is artificial and mainly restricted to writing, it will not come as a surprise that (formal) Dutch does not distinguish prepositions that require one of the two forms, which means that Dutch is unlike German, where prepositions can be divided into subclasses according to the case they assign. The only restriction that we find in this domain is that the singular neuter object pronoun *t* cannot occur as the complement of any preposition but triggers R-pronominalization. R-pronominalization is also possible with the other referential personal pronouns when the referent is not human (or at least inanimate given that the acceptable primeless examples can also be used to refer to, e.g., pets or pot plants).

- (300) • R-pronominalization
- |                                     |               |
|-------------------------------------|---------------|
| a. op hem/'m <sub>[+animate]</sub>  | a'. er ... op |
| b. op haar/'r <sub>[+animate]</sub> | b'. er ... op |
| c. *op het                          | c'. er ... op |
| d. op hen/ze <sub>[+animate]</sub>  | d'. er ... op |

#### 5.2.1.1.5. Weak and strong forms

This section will discuss some conditions on the use of the weak and strong forms of the referential personal pronouns.

*I. Emphasis*

Despite the fact that using the weak forms is preferred in speech, it is generally the strong form that is used in written text (a convention that we follow in our examples when the distinction between the weak and strong form does not play a role). In speech, the strong form is more or less restricted to contrastive contexts, unless, of course, a weak form is not available: in Standard Dutch, this holds for all forms of the polite second person pronoun *u* 'you', the subject and object form of the second person plural pronoun *jullie* 'you', and the object form of the first person plural pronoun *ons* 'us'; cf. Table 5.

*II. Pronouns in clause-initial position*

Topicalized phrases are normally stressed. As a result of this, topicalized object pronouns must have the strong form; topicalization of a weak object pronoun results in a degraded result. Some examples are given in (301).

- (301) a. Mij/\*Me heeft hij gisteren uitstekend geholpen.  
           me      has  he yesterday excellently helped  
           'He helped me very well yesterday.'  
       b. Jou/\*Je heeft hij toch ook gezien.  
           you     has  he PRT also seen  
           'He saw you as well, didn't he?'  
       c. Hem/\*'m heeft hij niet bezocht.  
           him      has  he not visited  
           'He didn't visit him.'  
       d. Hen/\*ze heeft hij niet bezocht.  
           them     has  he not visited

The third person neuter object pronoun *het* is special in that it is normally pronounced in its reduced form *'t* and therefore resists accent. The only exceptions are cases like *Ze hebben 't/het gedaan* 'They had sex', where the strong pronoun *het* receives contrastive accent and refers to a sexual activity, especially the act of copulating; the weak pronoun can also refer as a regular deictic pronoun. Example (302) shows that, due to this special property, the third person neuter object pronoun never occurs in clause-initial position.

- (302) \*Het/'t heb ik op de tafel gelegd.  
           it      have I on the table put  
           Intended meaning: 'I have put it on the table.'

The requirement that the clause-initial constituent be stressed does not hold for subjects. As a result, both the weak and the strong pronouns can be used in clause-initial position. As a result of this, the neuter subject pronoun *het* in (303c') differs from the object pronoun *het* in that it is possible in clause-initial position.

- (303) a. Ik/'k heb een boek gekocht.  
           I      have a book bought  
       b. Jij/je bent een lieverd.  
           you are a darling

- c. Zij/ze is naar school.  
she is to school
- c'. Het/'t ligt op de tafel.  
it lies on the table

A special case is the weak third person masculine subject pronoun *-ie* 'he', which cannot appear in clause-initial position. This is probably due to the fact that it forms a phonologically unit with its preceding element: note that when the preceding element ends in a vowel, as in (304c), an intervocalic *-d-* appears.

- (304) a. Toen heeft-ie gezegd dat hij ziek was.  
then has-he said that he ill was
- b. dat-ie toen gezegd heeft dat hij ziek was.  
that-he then said has that he ill was
- c. Toen zei-d-ie dat hij ziek was.  
then said-he that he ill was

The weak feminine form of third person singular pronoun has two allomorphs: *'r* and *d'r*. The alternation is mainly phonologically conditioned: *'r* is used after non-nasal consonants; *d'r* is used after schwa; after nasal consonants, tensed vowels and diphthongs the two forms seem to freely alternate. Note that lax vowels mainly occur in closed syllables and are therefore not relevant here.

- (305) a. Ik heb 'r gisteren ontmoet.  
I have her yesterday met  
'I met her yesterday.'
- b. Ik ontmoette d'r gisteren nog.  
I met her yesterday only  
'I met her only yesterday.'
- c. Ik kan 'r/d'r morgen halen.  
I can her tomorrow get  
'I can pick her up tomorrow.'
- d. Ik zie 'r/d'r morgen.  
I see her tomorrow  
'I will see her tomorrow.'

### *III. Semantic restrictions*

The use of the strong form is also semantically restricted: whereas the (a)-examples in (306) show that the strong third person plural pronouns can refer to [+ANIMATE] referents, the (b)-examples show they cannot refer to [-ANIMATE] referents; in order to refer to an inanimate referent, the weak form *ze* must be used. This holds both for the subject and the object pronouns, although the effect is weaker with the former.

- (306) a. Ze/Zij zijn ziek.  
they are ill  
'They (the girls) are ill.'
- a'. Ik heb ze/hen gisteren gesproken.  
I have them yesterday spoken  
'I spoke with them (the girls) yesterday.'

- b. Ze/<sup>??</sup>Zij zijn verscheurd.  
 they are torn.up  
 'They (the papers) are torn up.'
- b'. Ik heb ze/\*hen verscheurd.  
 I have them torn.up  
 'I have torn them (the papers) up.'

With the singular third subject pronouns, there also seems to be a tendency to use the weak form, although this tendency is not so strong that the use of a strong form to refer to an inanimate referent leads to unacceptability; when the subject pronoun is masculine and occupies the clause-initial position, using the strong form is even the only option since the reduced form *-ie* cannot be used in this position.

- (307) a. Waar is de soep? Ze/<sup>??</sup>Zij staat in de ijskast.  
 where is the soup she stands in the fridge  
 'Where is the soup? It's in the fridge.'
- b. Waar is mijn fiets? Hij staat achter die auto.  
 where is my bike he stands behind that car  
 'Where's my bike? It is behind that car.'

Many speakers of Standard Dutch no longer make a systematic distinction between masculine and feminine nouns, and would not use the feminine pronoun *zij/ze* in an example like (307a) but the masculine pronoun *hij*. Although such speakers readily allow the strong pronoun *hij* to refer to [-HUMAN] entities, they prefer the use of the weak object pronoun *'m* over the strong form *hem*: using the latter in (308) strongly suggests that the speaker has put a person in the fridge.

- (308) Ik heb 'm/<sup>#</sup>hem in de ijskast gezet.  
 I have him into the fridge put  
 'I have put it in the fridge.'

Haeseryn et al. (1997: 243) report that the reduced object pronoun *'r/d'r* is never used to refer to non-human antecedents; speakers who still distinguish masculine and feminine nouns use the phonologically light form *ze* for this purpose. For these speakers, we find the pattern in (309): *'r/d'r* can only be used to refer to female persons, whereas *ze* can be used to refer to either persons or objects. Speakers who do not distinguish masculine and feminine nouns never use *ze* as a singular pronoun (hence the % sign).

- (309) a. Waar is Lisa? Heb je d'r/%ze ergens gezien?  
 where is Lisa have you her somewhere seen  
 'Where is Lisa? did you see her somewhere?'
- b. Waar is de pan? Heb je <sup>??</sup>d'r/%ze ergens gezien?  
 where is the pan have you her somewhere seen  
 'Where is the pan? did you see it somewhere?'

#### IV. *Special syntactic environments*

There are a number of syntactic environments in which weak pronouns cannot occur. Generally these are contexts in which the pronoun must be assigned stress; compare the discussion of topicalized object pronouns in Subsection II.

### A. Vocative

Vocatives are always stressed. Similarly, when a pronoun is used to attract someone's attention, it must also be stressed.

- (310) Jij/\*Je, kom eens hier.  
you come PRT. here

### B. Focus particles

Elements preceded by focus particles like *zelfs* 'even' or *ook* 'also' are always stressed. Consequently, weak pronouns cannot occur with these elements.

- (311) a. Zelfs wij/\*we weten het.  
even we know it  
b. Ook jij/\*je moet komen.  
also you must come

### C. Coordination

Weak pronouns can never occur as a conjunct in a coordinated structure, as is shown in (312).

- (312) a. Peter en jij a'. \*Peter en je  
b. jij en Peter b'. \*je en Peter  
c. Zij en jij c'. \*ze en je

### D. Complement of certain prepositions

Certain (phrasal) prepositions require that stress be assigned to their complement. Weak pronouns are therefore not possible as the complement of these prepositions.

- (313) a. Jan sprak namens hem/\*'m.  
Jan spoke on behalf of him  
b. Het is gelukt ondanks hem/\*'m.  
it has succeeded despite him  
c. Het feest is ter ere van haar/\*'r.  
the party is in honor of her

When a preposition does not require stress on its complement, weak pronouns are possible. Recall, however, that this does not hold for the singular neuter pronoun 't. This pronoun never occurs as the complement of a preposition: PPs that allow it will undergo R-pronominalization; PPs that do not allow R-pronominalization, like those in (313), will exhibit an accidental gap in their syntactic paradigm.

- (314) a. Jan zat naast 'm a'. Jan zat ernaast/\*naast 't  
Jan sat next.to him Jan sat next.to it  
b. Jan wacht op me b'. Jan wacht erop/\*op 't  
Jan waits for me Jan waits for it

### E. Comparative *als/dan*

The nominal part of the complement in a comparative *als/dan* phrase must be assigned stress. Consequently, weak pronouns are not possible in this environment.



- (315) a. Jan is groter dan zij/\*ze.  
           Jan is taller than she  
       b. Die jongens zijn sneller dan wij/\*we.  
           those boys are faster than we

### V. *Special uses*

This subsection discusses some special uses of the referential personal pronouns. We start with the use of the second person singular subject pronoun *je* and the weak plural third person subject pronoun *ze* as generic pronouns. This is followed by a discussion of the use of the first person plural pronoun *we* 'we' to address the addressee. We conclude with some remarks on the emphatic pronoun *ikke* 'I'.

#### A. *Generic pronouns*

As we noted in 5.2.1.1.1, the weak second person singular subject pronoun *je* and the weak plural third person subject pronoun *ze* can be used in a similar fashion as the "indefinite" subject pronoun *men*; cf. example (280). The former is used in indefinite/generic expressions like (316a), and the latter in expressions like (316b) where the speaker is not able (or willing) to properly identify the source of the information given in the embedded clause.

- (316) a. In de bus moet je/<sup>#</sup>jij oppassen voor zakkenrollers.  
           in the bus must one take.care for pickpockets  
           'In the bus, one must beware of pickpockets.'  
       b. Ze/<sup>#</sup>Zij zeggen dat hij gestorven is.  
           they say that he died is  
           'Rumors have it that he has died.'

#### B. *Use of the first person plural pronoun to refer to the addressee*

In written texts, the writer may use the weak personal pronoun *we* 'we' to address himself, or, in an attempt to involve the reader more deeply in the discussion, as in (317a). A similar use of *we* can be found in speech when the speaker is in a hierarchically higher position than the addressee, for instance, in conversations between parents and their children, or a teacher and his pupils; in examples like (317b), the speaker need not, and often typically does not, include himself in the referent set of the pronoun. Replacing the weak pronoun in the examples in (317) by a strong one results in the loss of these special meanings; the strong pronouns can only be used as truly referring expressions.

- (317) a. We/<sup>#</sup>Wij zullen zien dat deze hypothese de feiten kan verklaren.  
           we will see that this hypothesis the data can explain  
           'We shall see that this hypothesis can explain the data.'  
       b. En nu gaan we allemaal rustig werken!  
           and now go we all quietly work  
           'And now we are all going to work quietly.'

Note that, syntactically speaking, the personal pronouns still function as first person pronouns, which is clear from the fact that they can be the antecedent of a (non-reduced) third person possessive pronoun.

- (318) a. We zullen zien dat onze hypothese de feiten kan verklaren.  
 we will see that our hypothesis the data can explain  
 'We shall see that our hypothesis is in accordance with the data.'
- b. En nu beginnen we allemaal aan ons opstel!  
 and now start we all with our essay  
 'And now we will all start with our essay.'

### C. Emphatic use of the first person singular pronoun

The strong form *ik* 'I' has an emphatic form *ikke*. This form is mainly used in question-answer pairs like (319a), where the person answering the question emphasizes his eagerness, or in contexts like (319b), where the person using this form expresses his surprise/indignation on the preceding contention by some other speaker. A similar "inflected" form is possible with the neuter demonstrative pronouns; *Wat heb je gekocht? Dit(te)/Dat(te)* 'What did you buy? This/that.'

- (319) a. Wie gaat er met me mee? Ikke!  
 who goes there with me prt. me  
 'Who is coming with me? I will!'
- b. Jij hebt mijn boek gestolen! Ikke!?  
 you have my book stolen me  
 'You stole my book! Me!?'

#### 5.2.1.1.6. Modification

Modification of referential personal pronouns is severely restricted. This is, of course, not surprising given that the use of a referential pronoun suggests that the listener is able to properly identify the intended referent, so that the use of a restrictive modifier is superfluous. We have seen in Section 5.2.1.1.2, however, that modifiers are occasionally used in order to facilitate identification of the intended referent. In the case of deictic pronouns, such restrictive modifiers are often a locational PP or the locational pro-form *daar/hier* 'there/here', as in (320). Note that the modifiers *daar* and *hier* are also common with other definite expressions, cf. *mijn vader bij die deur/daar* 'my father near that door/over there' and *dit boek op tafel/hier* 'this book on the table/here'. For similar cases involving PP-modifiers, see 3.3.1.1, sub V.

- (320) a. Hij bij de deur is mijn vader.  
 he near the door is my father
- b. Hij daar is mijn vader.  
 he there is my father  
 'He over there is my father.'

Section 5.2.1.1.2 has also shown that anaphoric pronouns can sometimes be modified in order to enable the addressee to pick out the intended domain of discourse. Bound pronouns are not eligible for modification: their reference is entirely determined by their antecedent in the sentence.

Referential personal pronouns can also be modified by a relative clause, as in (321). The relative clauses can be used either restrictively or non-restrictively. In the former case, the referential pronoun is anaphoric and the relative clause is added

to enable the addressee to place the information expressed by the main clause in its proper context.

- (321) Hij (,) die hier gisteren was (,) is vandaag naar Rome vertrokken.  
 he who here yesterday was is today to Rome left  
 'He (,) who was here yesterday (,) has left for Rome today.'

Occasionally, however, the use of a relative clause has a special effect. The modified pronoun in example (322a), for example, can be interpreted as semantically equivalent to the free relative construction in (322b). For more discussion of these and other cases involving relative clauses, see Section 3.3.2.3.2.1, sub ID.

- (322) a. Hij die zich tijdig ingeschreven heeft ontvangt in mei een brochure.  
 he who REFL in time prt.-registered has receives in May a booklet  
 b. Wie zich tijdig ingeschreven heeft, ontvangt in mei een brochure.  
 who REFL in time prt.-registered has receives in May a booklet  
 'Those who registered in time will receive a booklet in May.'

The use of pronominal modifiers seems categorically impossible, which, in fact, supports our earlier claim that referential personal pronouns are determiners. Note that examples like (323b) are only apparent counterexamples: the fact that the form *ik* is preceded by a determiner indicates that the pronoun is simply used as a noun comparable in meaning to the noun *aard* 'nature'.

- (323) a. \*Aardig(e) hij gaf me een fles wijn voor de moeite.  
 kind he gave me a bottle of wine for the effort  
 b. mijn ware ik/aard  
 my true nature

### 5.2.1.2. Interrogative personal pronouns

The [+HUMAN] pronoun *wie* 'who' and [-HUMAN] pronoun *wat* 'what' can be considered the interrogative counterparts of the third person personal pronouns. The examples in (324) show that the two interrogative pronouns can be used both as a subject and as an object.

- |                                                                                                                                                                                                            |                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(324) a. Wie heeft hem geslagen?<br/>         who has him hit<br/>         'Who hit him?'<br/>         b. Wie heeft hij geslagen?<br/>         who has he hit<br/>         'Who did he hit?'       </p> | <p>a'. Wat ligt daar?<br/>         what lies there<br/>         'What is lying there?'<br/>         b'. Wat heb je gekocht?<br/>         what have you bought<br/>         'What did you buy?'       </p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

When the pronoun is part of a PP, the behavior of the two pronouns diverges: whereas *wie* can readily occur as the complement of a preposition, *wat* behaves like the referential personal pronoun *het* 'it' in that it triggers °R-pronominalization. Most likely, this is related to the semantic distinction with respect to the feature [±HUMAN].

- (325) a. Op wie wacht je?  
           for who wait you  
           ‘For whom are you waiting?’  
       b. \*?Op wat wacht je?  
           for what wait you  
       b’. Waar wacht je op?  
           where wait you for  
           ‘What are you waiting for?’

The primeless examples in (326) show that *wie* and *wat* can also function as nominal predicates in copular constructions. This is, however, not possible in the *vinden* construction, as is shown in the primed examples.

- (326) a. Wie is hij?  
           who is he  
       a’. \*Wie vind je hem?  
           who consider you him  
       b. Wat wil je later worden?  
           what want you later be  
           ‘What do you want to be later?’  
       b’. ??Wat vind je hem, een dwaas of een genie?  
           who consider you him a fool or a genius

Note that we do find examples like (327), but this case is rather special in that *wat* seems to question a property: at least, a typical answer to this question would involve an adjectival predicate and not a nominal one. Another special use of *wat* is illustrated in (327b), where it questions not an argument or a predicate, but a phrase, which is obligatorily present but behaves in various respects like an adjunct, for which reason it is often considered a quasi-argument of the verb; cf. Rizzi (1990).

- (327) a. Wat vind je van hem? Hij is aardig.  
           what consider you of him he is nice  
           ‘What do you think of him? He is nice.’  
       b. Wat weeg je? 65 kilo.  
           what weigh you 65 kilos  
           ‘What do you weigh? 65 kilos.’

Finally, note that the earlier mentioned restriction that *wat* cannot occur as the complement of a PP does not hold in echo-questions like (328a), in which the question word is stressed. In echo-questions contexts *wat* can also be used to as a request to repeat/clarify an earlier utterance; example (328b) shows that in this case *wat* sometimes alternates with the form *watte*.

- (328) a. Je wacht op WAT?  
           you wait for what  
           ‘You are waiting for WHAT?’  
       b. Ik zal de hond maar eens schoppen. WAT/WATTE?  
           I will the dog prt. prt. kick what  
           ‘I think I will kick the dog. I BEG YOUR PARDON?’

The examples in (329) show that the interrogative pronouns are formally third person: this is clear from the form of the finite verb and from the fact that the third person possessive pronoun *zijn* ‘his’ can take the interrogative pronoun as its antecedent.

- (329) a. *Wie<sub>i</sub> heeft<sub>3sg</sub> zijn<sub>i</sub> auto voor de deur gezet?*  
           who has his car in.front.of the door put  
           ‘Who has put his car in front of the door?’  
       b. *Wat<sub>i</sub> heeft<sub>3sg</sub> Jan uit zijn<sub>i</sub> doos gehaald?*  
           what has Jan out.of his box taken  
           ‘What did Jan take out of its box?’

The two pronouns differ, however, with respect to number: the form of the finite verb in (330a) shows that, formally, the [+HUMAN] pronoun *wie* can be either singular or plural; the fact that the [-HUMAN] pronoun *wat* in (330b) is only compatible with the singular form of the finite verb shows that, formally, it is singular. This does not imply that it cannot be used to question more than one thing: an answer to (330b) can easily involve a list of objects. The fact that the quantifier *allemaal* can be used in (330b) also indicates that *wat* can be semantically plural; cf. *Zij zijn allemaal ziek* ‘they are all ill’ versus *\*Hij is allemaal ziek* ‘He is all ill’.

- (330) a. *Wie is/zijn er vertrokken?*  
           who is/are there left  
           ‘Who has/have left?’  
       b. *Wat ligt/\*liggen er (allemaal) in de la?*  
           what lies/lie there all in the drawer  
           ‘What is lying in the drawer?’

Example (331a) shows that using the quantifier *allemaal* may give rise to a marked result when the [+HUMAN] pronoun *wie* triggers singular agreement on the verb. It is, however, not hard to find fully acceptable cases like these on the internet. Singular agreement can, for instance, regularly be found with the verb *komen* ‘to come’ in (331a’). Perhaps this is related to the fact that this verb may take a secondary predicative in the form of a PP, given that copular constructions like (331b&b’) are also clear exceptions to the general tendency to avoid singular agreement in the presence of *allemaal*.

- (331) a. *Wie zijn/?is er allemaal vertrokken?*  
           who are/is there all left  
       a’. *Wie komt/komen er allemaal (naar/uit ...)?*  
           who comes/come there all to/from  
       b. *Wie is/zijn er allemaal ziek?*  
           who is/are there all ill  
       b’. *Wie is/zijn er allemaal lid?*  
           who is/are there all member

The fact that the examples in (330) and (331), in which the pronoun functions as the subject of the clause, contain the °expletive *er* ‘there’ shows that the interrogative pronouns are indefinite: when the expletive is dropped, the result is

unacceptable, unless some presuppositional constituent is present; cf. (324a) and (329a).

- (332) a. Wie is/zijn \*(er) vertrokken?  
 b. Wat ligt \*(er) in de la?

The examples in (333) show that the pronouns *wie* and *wat* can be modified by elements like *dan ook* or *om het even*. However, this results in the loss of their interrogative force: the meaning of these phrases comes close to English formations with *any*. Perhaps this is not so surprising for *wat*, given that we will see in the next section that this pronoun can also be used as a quantificational personal pronoun, but it is for *wie*, which lacks this option.

- (333) a. Dit kan door wie dan ook/om het even wie gedaan zijn.  
           this can by anyone/anyone done be  
           ‘This could be done by anyone.’  
 b. Je kan hem om het even wat geven.  
     you can him anything give

Interrogative personal pronouns do not readily allow other forms of modification. The examples in (334) involving postmodification, for example, are marginal at best.

- (334) a. <sup>??</sup>Wie bij de deur is jouw vader?  
           who near the door is your father  
       a'. <sup>??</sup>Wie daar is je vader?  
           who there is your father  
 b. <sup>??</sup>Wie die hier gisteren was is vandaag naar Rome vertrokken?  
     who that here yesterday was is today to Rome left  
     ‘Who that was here yesterday has left for Rome today?’

### 5.2.1.3. Quantificational personal pronouns

The quantificational personal pronouns can also be divided into [+HUMAN] and [-HUMAN] forms. The former consist of the existential quantifier *iemand* ‘someone’ and the universally quantified pronoun *iedereen* (in writing, the formal forms (*een*)*ieder* and *elkeen* can also be found, the latter of which is generally considered archaic). The [-HUMAN] counterparts of these pronouns are *iets* ‘something’, or its more colloquial alternate *wat*, and *alles* ‘all’. Both the [+HUMAN] and [-HUMAN] existential quantifiers have negative counterparts, which are, respectively, *niemand* ‘nobody’ and *niets* or its more colloquial alternate, *niks* ‘nothing’.

Table 7: Quantificational personal pronouns

|             |          | [+HUMAN]                    | [-HUMAN]                      |
|-------------|----------|-----------------------------|-------------------------------|
| EXISTENTIAL | POSITIVE | <i>iemand</i> ‘someone’     | <i>iets/wat</i> ‘something’   |
|             | NEGATIVE | <i>niemand</i> ‘nobody’     | <i>niets/niks</i> ‘something’ |
| UNIVERSAL   |          | <i>iedereen</i> ‘everybody’ | <i>alles</i> ‘everything’     |

Below, we will discuss some properties of the quantificational nouns shown in Table 7. Before we do this we want to note that in traditional grammar, forms like

*sommige(n)* ‘some’, *vele(n)* ‘many’ and *alle(n)* ‘all’ are also categorized as personal pronouns. However, since these forms can be considered nominalizations of the corresponding quantificational modifiers, they will be discussed in Section 6.2.

### 1. Meaning

The easiest way of explaining the core meaning of quantification personal pronouns is by using Figure 1 from Section 1.1.2.2.1, repeated below, to represent the subject-predicate relation in a clause. In this figure “A” represents the set denoted by the subject NP and “B” the set denoted by the verb phrase. The intersection  $A \cap B$  denotes the set of entities for which the proposition expressed by the clause is claimed to be true. In an example like *Jan wandelt op straat*, for example, it is claimed that the set denoted by A, viz. {Jan}, is properly included in set B, which is constituted by the people walking in the street. In other words, it expresses that  $A - (A \cap B) = \emptyset$ .

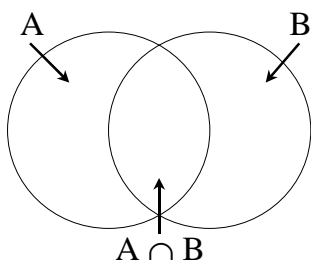


Figure 1: Set-theoretic representation of the subject-predicate relation

In the discussion below we will not be interested in the fact that the [+HUMAN] and [-HUMAN] pronouns are associated with two mutually exclusive denotation sets: with the former, set A is a (possibly contextually defined) set of individuals, whereas with the latter set A is a (possibly contextually defined) set of non-human entities. We will rather focus on the implication of the pronouns for the intersection  $A \cap B$  and the remainder of set A, that is,  $A - (A \cap B)$ .

The existential pronouns *iemand* and *iets* behave similarly to indefinite noun phrases in that they indicate that  $A \cap B$  is not empty, and do not imply anything about the set  $A - (A \cap B)$ , which may or may not be empty.

- (335) a. Er loopt iemand op straat.  
           there walks someone in the street  
           ‘There is someone walking in the street.’  
       a’. iemand:  $|A \cap B| \geq 1$   
       b. Er zit iets in die doos.  
           there sits something in that box  
           ‘There is something in that box.’  
       b’. iets:  $|A \cap B| \geq 1$

In contrast to what we did with singular indefinite noun phrases in Section 5.1.1.1, we follow the philosophical tradition here in assuming that these quantification pronouns have the cardinality  $\geq 1$ . The reason for this is that the existential pronouns can be used in *yes/no*-questions without the implication that there is at

most one individual/entity that satisfies the description provided by the verb phrase. This will be clear from the fact that the question-answers pairs given in (336) constitute a perfectly coherent piece of interaction.

- (336) a. Komt er vanavond iemand? Ja, Jan en Peter met hun partner.  
comes there tonight someone yes Jan and Peter with their partner  
'Is there anyone coming tonight? Yes, Jan and Peter with their partner.'  
b. Zit er nog iets in die doos? Ja, een paar boeken.  
sits there still something in that box yes a couple of books  
'Is there still something in that box? Yes, a couple of books.'

Whereas the semantic contribution of the existential quantifiers resembles that of the indefinite noun phrases, the universal quantifiers instead resemble the definite noun phrase: they express that in the domain of discourse (domain D), all entities that satisfy the description of the pronoun (human/non-human) are included in the intersection  $A \cap B$ , that is, that  $A - (A \cap B) = \emptyset$ .

- (337) a. Iedereen loopt op straat.  
everyone walks in the street  
a'. iedereen:  $A - (A \cap B) = \emptyset$  &  $|A \cap B| \geq 1$   
b. Alles zit in de doos.  
everything is in the box  
b'. alles:  $A - (A \cap B) = \emptyset$  &  $|A \cap B| \geq 1$

Now that we have seen that the existential and the universal personal pronouns resemble noun phrases containing, respectively, an indefinite and a definite article, it will probably not come as a surprise that the negative existential personal pronouns resemble noun phrases containing the negative article *geen*: they express that the intersection  $(A \cap B)$  is empty.

- (338) a. Er loopt niemand op straat.  
there walks no.one in the street  
'There is no one walking in the street.'  
a'. niemand:  $|A \cap B| = \emptyset$   
b. Er zit niets in die doos.  
there sits nothing in that box  
'There is nothing in that box.'  
b'. niets:  $|A \cap B| = \emptyset$

## II. Number

The examples in (339) and (340) show that the quantificational pronouns are, formally, third person, singular pronouns. This is clear from subject agreement with the finite verb, which must also be third person singular, and from the fact that the third person singular possessive pronoun *zijn* 'his' can take these pronouns as its antecedent.



- (339) a. Er heeft/\*hebben iemand<sub>i</sub> zijn<sub>i</sub> auto verkeerd geparkeerd.  
           there has/have       someone his car wrongly parked  
       b. Er heeft/\*hebben niemand<sub>i</sub> zijn<sub>i</sub> auto verkeerd geparkeerd.  
           there has/have       no.one his car wrongly parked  
       c. Iedereen<sub>i</sub> heeft/\*hebben zijn<sub>i</sub> auto verkeerd geparkeerd.  
           everyone has/have       his car wrongly parked
- (340) a. Er ligt/\*liggen iets<sub>i</sub> uit zijn<sub>i</sub> doos.  
           there lies/lie       something out.of his box  
           ‘There is something out of its box.’  
       b. Er ligt/\*liggen niets<sub>i</sub> uit zijn<sub>i</sub> doos.  
           there lies/lie       nothing out.of his box  
           ‘There is nothing out of its box.’  
       c. Alles<sub>i</sub> ligt/\*liggen in zijn<sub>i</sub> doos.  
           everything lies/lie       in his box  
           ‘Everything is in its box.’

### III. Nonspecific and specific readings of the existential pronouns

The fact that the existentially quantified subject pronouns in (339a) and (340a) co-occur with the expletive *er* ‘there’ shows that they can be °weak noun phrases. The examples in (341) show, however, that these quantificational pronouns can also be strong, that is, can also appear in the regular subject position.

- (341) a. Er heeft iemand gebeld.       b. Er is iets gevallen.  
           there has   someone called       there is something fallen  
           ‘Someone has called.’               ‘Something has fallen.’  
       a’. ?Iemand heeft gebeld.       b’. ??Iets is gevallen.

The primed examples are marked, however, in the sense that they require a special intonation pattern: they are only natural when the quantificational pronoun is assigned accent. The pronouns in the primed examples then receive a specific indefinite reading, which can be paraphrased by means of *een zeker persoon/ding* ‘a certain person/thing’. The pronouns in the primeless examples, on the other hand, can be interpreted non-specifically, which is clear from the fact that they can be paraphrased by means of *een of ander persoon/ding* ‘some person/thing’. The examples in (342) show that the more colloquial existential pronoun *wat* differs from *iets* in that it can only occur with the expletive, which shows that *wat* can only be interpreted non-specifically.

- (342) a. Er is wat gevallen.  
           there is something fallen  
           ‘Something has fallen.’  
       b. \*Wat is gevallen.

The fact that the quantificational pronouns in (341a&b) can be interpreted non-specifically does not mean that they must be interpreted this way. Actually, there is reason to assume that they can have both a nonspecific and a specific reading. The two readings can be made prominent by adding a quantified adverbial phrase like *verschillende keren* ‘several times’ to the sentence. When the existential quantifier

follows the adverbial phrase, as in (343a), it can only be interpreted non-specifically, which is clear from the fact that the quantifier may then range over a non-singleton set of entities, that is, that several persons have called or several things have fallen. This reading is normally expressed by assuming that the existential quantifier is in the °scope of the quantified adverbial phrase *verschillende keren*.

- (343) a. Er heeft verschillende keren iemand gebeld.  
           there has several times someone called  
       b. Er is verschillende keren iets/wat gevallen.  
           there has several times something fallen

When the existential quantifier precedes the adverbial phrase, on the other hand, it must receive a specific interpretation; in (344a) the phone calls were all made by the same person, the identity of whom is concealed by the speaker; in (344b) it is a certain thing, which is not further specified, which has fallen several times. Note that *iets* in (344b) cannot be replaced by *wat*, which supports the claim made on basis of (342) that *wat* is inherently nonspecific.

- (344) a. Er heeft iemand verschillende keren gebeld.  
           there has someone several times called  
       b. Er is iets/\*wat verschillende keren gevallen.  
           there has something several times fallen

Although the specific interpretation can in principle be expressed by assuming that the existential quantifier takes the quantified phrase in its scope, doing this may be beside the point given that a similar meaning difference can be found in (345), where the adverbial phrase is not quantificational in nature. It therefore seems easier to simply assign *iemand/iets* the reading “a certain person/thing” when it occurs in front of a °clause adverb; see Hornstein (1984) for a similar claim concerning English existentially quantified noun phrases.

- (345) a. Er heeft gisteren iemand gebeld.  
           there has yesterday someone called  
       b. Er heeft iemand gisteren gebeld.  
           there has someone yesterday called

Note that although we can paraphrase the specific and nonspecific readings of *iemand* and *iets* by means of indefinite noun phrases preceded by the indefinite article *een*, the former differs from the latter in not allowing a generic interpretation: whereas the generic sentence in (346a) is fully acceptable, example (346b) can certainly not be interpreted generically.

- (346) a. Een mens is sterfelijk.  
           a human being is mortal  
           ‘Man is mortal.’  
       b. \*?Iemand is sterfelijk.  
           someone is mortal

Possible exceptions to the general rule that *iemand* and *iets* cannot be used generically are given in (347), taken from Haeseryn et al. (1997), which are special in that they contain two conjoined predicates that are mutually exclusive.

- (347) a. *Iemand* is getrouwd of ongetrouwd.  
           someone is married or not.married  
       b. *Iets* is waar of niet waar.  
           something is true or not true

Of course, generic meanings can be and are, in fact, typically expressed by means of the universal personal pronouns: cf. *Iedereen is sterfelijk* 'Everyone is mortal' and *Alles is vergankelijk* 'Everything is fleeting'.

#### IV. *Negative existential subject pronouns*

The negative existential pronouns *niemand* 'no one' and *niets/niks* 'nothing' are normally used as weak quantifiers, which is clear from the fact that, as subjects, they are preferably used in an expletive construction. Examples like (348a'&b') are acceptable, but generally require emphatic °focus: the quantifier then receives an emphatic reading comparable with the "not a single N" reading of noun phrases with *geen*; cf. Section 5.1.5.1.3.

- (348) a. *Er* heeft niemand gebeld.      b. *Er* is niets gevallen.  
           there has nobody called      there is nothing fallen  
           'Nobody has called.'      'Nothing has fallen.'  
       a'. *Niemand* heeft gebeld.      b'. *Niets* is gevallen.  
           nobody has called      nothing is fallen  
           'Not a single person called.'      'Not a single thing fell.'

The negative quantifiers *niemand* and *niets* can probably best be considered as the negative counterparts of the nonspecific quantifiers *iemand* and *iets*: when we want to negate a sentence containing the specific forms of these quantifiers, negation is not expressed on the quantifier, but by means of the negative adverb *niet*. Example (349)s show that the specific quantificational pronoun must precede this adverb. For completeness' sake, note that, in accordance with the earlier suggestion that it is inherently nonspecific, *wat* cannot substitute for *iets* in (349b).

- (349) a. *Er* heeft iemand niet gebeld.  
           there has someone not called  
           'A certain person didn't call.'  
       b. *Er* is iets/\*wat niet gevallen.  
           there is something not fallen  
           'A certain thing didn't fall.'

In contrast to the existential quantifiers (cf. (346b)), the negative existential quantifiers in (350) can readily be used in generic statements. In examples like these, the negative quantifiers behave like strong quantifiers, that is, they cannot be used in an expletive construction.

- |                                                                                                                                                                                      |                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(350) a. Niemand is onsterfelijk.<br/>                   nobody is immortal<br/>                   ‘Nobody is immortal.’<br/>               a’. *?Er is niemand onsterfelijk.</p> | <p>b’. Niets is tevergeefs.<br/>               nothing is in.vain<br/>               ‘Nothing is in vain.’<br/>               b’. *?Er is niets tevergeefs.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### *V. Syntactic distribution*

Quantificational pronouns can be used in all regular argument positions. In (351) and (352) this is illustrated for, respectively, the subject and the object position.

- (351) a. Er ligt iemand/iets op mijn bed.  
           there lies someone/something on my bed  
           ‘There is someone/something lying on my bed.’  
       b. Er ligt niemand/niets op mijn bed.  
           there lies no.one/nothing on my bed  
           ‘There is no one/nothing lying on my bed.’  
       c. Iedereen/Alles ligt op mijn bed.  
           everybody/everything lies on my bed
- (352) a. Jan heeft iemand/iets weggebracht.  
           Jan has someone/something brought.away  
           ‘Jan has brought away someone/something.’  
       b. Jan heeft niemand/niets weggebracht.  
           Jan has no.one/nothing brought.away  
           ‘Jan has brought away no one/nothing.’  
       c. Jan heeft iedereen/alles weggebracht.  
           Jan has everyone/everything brought.away  
           ‘Jan has brought everyone/everything away.’

The examples in (353) show that [+HUMAN] quantificational personal pronouns can also be used as the complement of a preposition. The existential pronoun in (353a) can be either specific or nonspecific, and the negative existential pronoun in (353b) is interpreted with its normal, non-emphatic, reading.

- (353) a. Jan wil op iemand wachten.  
           Jan wants for someone wait  
           ‘Jan wants to wait for someone.’  
       b. Jan wil op niemand wachten.  
           Jan wants for no.one wait  
           ‘Jan doesn’t want to wait for anyone.’  
       c. Jan wil op iedereen wachten.  
           Jan wants for everyone wait  
           ‘Jan wants to wait for everyone.’

The situation is somewhat more complex with the [-HUMAN] pronouns due to the fact that they can undergo °R-pronominalization, that is, the primeless examples in (354) alternate with the primed examples.

- |          |         |                   |                        |
|----------|---------|-------------------|------------------------|
| (354) a. | P iets  | a'. ergens ... P  | [existential]          |
| b.       | P niets | b'. nergens ... P | [negative existential] |
| c.       | P alles | c'. overal ... P  | [universal]            |

The examples in (355) show that the existential pronoun *iets* alternates with the R-word. Although judgments are somewhat subtle, it seems that (355a) is preferably construed as specific, whereas (355b) instead receives a nonspecific interpretation.

- (355) a. Jan wil op iets wachten.  
 Jan wants for something wait  
 'Jan wants to wait for something.'
- b. Jan wil ergens op wachten.  
 Jan wants somewhere for wait  
 'Jan wants to wait for something.'

With the negative existential pronouns, R-pronominalization seems to be the unmarked option. Realizing the pronoun as the complement of the preposition seems to give rise to a "not a single thing" reading.

- (356) a. Jan wil op niets wachten.  
 Jan has for nothing wait  
 'Jan doesn't want to wait for anything.'
- b. Jan wil nergens op wachten.  
 Jan wants nowhere for wait  
 'Jan doesn't want to wait for anything.'

With the universal pronoun, R-pronominalization may also be the unmarked option. Realizing the pronoun as the complement of the preposition seems to give rise to an emphatic "each and every thing" reading.

- (357) a. Jan wil op alles wachten.  
 Jan wants for everything waited  
 'Jan wants to wait for everything.'
- b. Jan wil overal op wachten.  
 Jan wants everywhere for wait  
 'Jan wants to wait for everything.'

Given that the above observations are rather impressionistic, more research is needed to establish whether the R-forms are indeed unmarked and whether the two forms indeed exhibit systematic meaning differences of the sort suggested here.

Finally, it can be noted that the positive and negative existential pronouns can also be used as the predicate in a copular construction, although they normally require some form of modification. This is illustrated in (358) for the nonspecific use of the pronouns; it is probably not surprising that the negative existential pronouns have a more or less idiomatic interpretation.

- (358) a. Jan is iemand van mijn school.  
Jan is someone from my school  
a'. Die gewoonte is nog iets uit mijn schooltijd.  
that habit is still something from my school.days  
b. Jan is niemand.  
Jan is no.one  
'Jan is a nobody.'  
b'. Dat probleem is niets.  
that problem is nothing  
'That problem is of no importance.'

The predicatively used, existentially quantified pronouns in the primeless examples of (359) receive a specific interpretation, which is clear from the fact that their negative counterparts in the (b)-examples do not involve the negative existential pronouns, which are preferably construed as nonspecific, but the negative adverb *niet*.

- (359) a. Hij is iemand [met wie je gemakkelijk kan praten].  
he is someone with whom you easily talk can  
'He is someone with whom one can talk easily.'  
a'. Hij is niet iemand [met wie je gemakkelijk kan praten].  
he is not someone with whom you easily talk can  
b. Dat is iets [om rekening mee te houden].  
that is something COMP account with to keep  
'This is something to take into account.'  
b'. Dat is niet iets [om rekening mee te houden].  
that is not something COMP account with to keep

## *VI. Modification*

Quantificational personal pronouns often occur with postmodifiers, which then function to restrict the set denoted by the pronoun. This is illustrated in (360) by means of the [+HUMAN] pronouns. In all these examples, the set of persons is restricted to a subset of it.

- (360) a. Iemand uit de keuken/daar heeft een mes in zijn hand gestoken.  
someone from the kitchen/there has a knife into his hand stuck  
'Someone from the kitchen/over there has stuck a knife into his hand.'  
a'. Iemand die niet goed oplette, heeft een mes in zijn hand gestoken.  
someone who not well prt.-attended has a knife into his hand stuck  
'Someone who didn't pay attention has stuck a knife into his hand.'  
b. Iedereen op mijn werk/hier is ziek.  
everyone at my work/here is ill  
b'. Iedereen die goed oplet, zal het examen zeker halen.  
everyone who well prt.-attends will the exam certainly pass  
'Everyone who pays attention in class will certainly pass the exam.'

Premodification by means of an attributive adjective, on the other hand, seems to be excluded. Note that an example like (361a) is only an apparent

counterexample to this claim: the fact that the form *iemand* is preceded by an indefinite article indicates that the pronoun is simply used as a noun comparable in meaning to a noun like *persoon* ‘person’. Although the result feels somewhat marked, example (361b) shows *iets* can be used in a similar way with the meaning ‘thing’; *wat* is, however, completely unacceptable in such constructions. Note that the constructions in (361) actually require the presence of an attributive modifier: cf. *\*een iemand* and *\*een iets*.

- (361) a. een keurig/aardig iemand                      b. een leuk <sup>?</sup>iets/\*wat  
           a neat/nice someone                      a nice something  
           ‘a neat/nice person’                      ‘a nice thing’

Existential pronouns can be modified in two other ways. First, these pronouns can be followed by the element *anders* ‘else’. These constructions are discussed more extensively in Section A7.4.

- (362) a. iemand anders                                      b. iets/wat anders  
           someone else                                      something else

Second, the existential pronouns *iemand* and *iets* can be premodified with *zo* ‘such’, which results in a “type” reading of the quantifier. The pronoun *wat* lacks this option, which is clear from the fact that whereas a Google search on the string [*ook zo iets gelezen*] resulted in 124 hits, no results were obtained for the string [*ook zo wat gelezen*].

- (363) a. Ik ken ook zo iemand.  
           I know also such someone  
           ‘I also know a person like that.’  
       b. Ik heb onlangs ook zo iets/\*<sup>?</sup>wat gelezen.  
           I have recently also such something read  
           ‘I have also read a thing like that recently.’

#### 5.2.1.4. Relative personal pronouns

This section on relative personal pronouns will be relatively brief given that these pronouns can be discussed in a more natural way in relation to the syntactic context in which they are found, relative clauses; see Section 3.3.2.2.1 for a more exhaustive discussion of these pronouns. Here, we will confine ourselves to a concise discussion of the most common forms in their most common uses, and focus on the fact that these pronouns can be used as arguments of the clause, and should hence be considered personal pronouns. The relative personal pronouns in question can be divided into the three groups in (364).

- (364) a. D-pronouns: *die* and *dat*  
       b. W-pronouns: *wie*<sub>[+human]</sub> and *wat*<sub>[-human]</sub>  
       c. R-pronoun: *waar* + P

##### 1. D-group

The choice between *die* and *dat* depends on the gender and number features of the antecedent of the pronoun: *dat* is used for singular, neuter nouns and *die* in all other cases. This is illustrated in example (365).

## (365) The antecedent of relative personal pronouns of the D-group

|           | SINGULAR                                                                                    | PLURAL                                                                                           |
|-----------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| [-NEUTER] | <i>de bal die daar ligt</i><br>the ball that there lies<br>'the ball that is lying there'   | <i>de ballen die daar liggen</i><br>the balls that there lie<br>'the balls that are lying there' |
| [+NEUTER] | <i>het boek dat daar ligt</i><br>the book that there lies<br>'the book that is lying there' | <i>de boeken die daar liggen</i><br>the books that there lie<br>'the books that are lying there' |

The D-pronouns must be considered personal pronouns given that they may occur as subject or object of the relative clause, as is illustrated in (366a-c). Example (366d) shows, however, that D-pronouns are special in that they do not occur as the complement of a preposition.

- (366) a. *de jongen [die hier gisteren was]* [subject]  
the boy that here yesterday was  
'the boy who was here yesterday'
- b. *het boek [dat ik gisteren gekocht heb]* [direct object]  
the book that I yesterday bought have  
'the book I bought yesterday'
- c. *het meisje [dat ik het boek gegeven heb]* [indirect object]  
the girl that I the book given have  
'the girl that I gave the book'
- d. \**de jongen [over die ik spreek]* [complement of P]  
the boy of that I speak  
Intended meaning: 'the boy I spoke about'

## II. W-pronouns

The choice between *wie* and *wat* depends on whether the antecedent is human or not. Given that the W-pronouns are typically used in free relative clauses, this antecedent will generally be left implicit. The W-pronouns can be used as the subject or the object of the relative clause. Example (367c) is perhaps slightly marked due to the fact that it is potentially ambiguous: both the relative pronoun and the personal pronoun can in principle be interpreted as indirect objects. It is hard to construct natural sounding examples for *wat* with the function of indirect object, which is due to the fact that indirect objects are typically human.

- (367) a. [*Wie dit zegt*] is gek.  
who this says is crazy  
'Whoever is saying this is mad.'
- a'. [*Wat daar staat*] klopt niet.  
what there stands be.correct not  
'What is written there is false.'



- b. [Wie je daar ziet] is Peter.  
     who you there see is Peter  
     ‘The person you see over there is Peter.’
- b'. [Wat je daar zegt] klopt niet.  
     what you there say is.correct not  
     ‘What you are saying there is false.’
- c. ?[Wie je dat geeft] wordt een gelukkig mens.  
     who you that give becomes a lucky person  
     ‘The person you give that to will be a lucky person.’

As is discussed in Section 3.3.2.2.1, the use of W-pronouns is subject to several constraints when the antecedent is overtly realized. However, in this context *wie* can readily be used as the complement of a preposition. The pronoun *wat*, on the other hand, cannot be used in this position: the next subsection will show that it triggers R-pronominalization, just like the referential pronoun *het*.

- (368) a. De man [op wie ik wacht] is Peter.  
           the man for whom I wait is Peter  
           ‘The man for whom I am waiting is Peter.’
- b. \*De tekening [naar wat ik kijk] is erg mooi.  
           the drawing at what I look is very beautiful  
           Intended meaning: ‘The drawing I am looking at is very beautiful.’

### III. The R-pronoun *waar* + *P*

The °R-pronoun *waar* is typically used as the complement of a preposition. The pronoun is not sensitive to the nominal features of the antecedent, and can be used both with human and non-human antecedents. This means that example (368a) freely alternates with the form in (369a), despite normative pressure in favor of the former variant. The grammatical counterpart of example (368b) is the one in (369b). R-pronominalization is possible both with PP-complements of the verb and with certain adverbial PPs; examples of the latter can be found in Section 3.3.2.2.1.

- (369) a. De man [waar ik op wacht] is Peter.  
           the man where I for wait is Peter  
           ‘The man I am waiting for is Peter.’
- b. De tekening [waar ik naar kijk] is erg mooi.  
           the drawing where I at look is very beautiful  
           ‘The drawing I am looking at is very beautiful.’

### IV. Conclusion

The previous subsections have shown that the relative pronouns in (364) can be used as arguments of the verb, and should hence be considered personal pronouns. This does not mean, however, that they can occur in all positions. We have seen that there are several additional constraints that regulate their distribution. A more extensive discussion of these relative pronouns can be found in Section 3.3.2.2.1.

### 5.2.1.5. Reflexive and reciprocal personal pronouns

This section will discuss the reflexive and reciprocal pronouns, which have the characteristic property that they must be bound by (= be coreferential with) an antecedent noun phrase in the same clause. We will first discuss the paradigm of the reflexive pronouns, which will be followed by a discussion of the reciprocal *elkaar* ‘each other’. The section will be concluded with a discussion of the so-called binding properties of these pronouns.

#### 1. The reflexive pronouns

The form of the reflexive pronouns is determined by their antecedent: they vary according to the person and number features involved, just like the referential personal pronouns. They differ from the referential pronouns, however, in that they are not marked for gender: the third person reflexive pronoun *zich(zelf)* is not sensitive to the gender of the head noun of its antecedent. The Dutch reflexive pronouns can further be divided into two morphologically distinct groups: the first group consists of monomorphemic forms, whereas the second group consists of bimorphemic forms that result from the addition of the bound morpheme *-zelf* to the monomorphemic forms. We will refer to these two groups as the **SIMPLEX** and **COMPLEX REFLEXIVES**, respectively. The full paradigm is given in Table 8.

Table 8: Reflexive personal pronouns

|               |         | SINGULAR |                | PLURAL  |                |
|---------------|---------|----------|----------------|---------|----------------|
|               |         | SIMPLEX  | COMPLEX        | SIMPLEX | COMPLEX        |
| FIRST PERSON  |         | me       | mezelf         | ons     | onszelf        |
| SECOND PERSON | REGULAR | je       | jezelf         | je      | jezelf         |
|               | POLITE  | u/zich   | uzelf/zichzelf | u/zich  | uzelf/zichzelf |
| THIRD PERSON  |         | zich     | zichzelf       | zich    | zichzelf       |

The simplex reflexive pronouns of the first and second person are homophonous to the reduced object forms of the corresponding referential pronouns, if available. The second person plural reflexive pronoun *je* differs from the referential one in that the latter must appear as the phonologically heavy form *jullie*. The polite reflexive form can be either *u* or *zich*; that the latter is possible may be related to the fact that the referential pronoun *u* behaves syntactically like a third person pronoun in that it triggers third person singular agreement on the finite verb (cf. Section 5.2.1.1.1); the fact that the referential pronoun *u* can be the antecedent of the reflexive *zich(zelf)* shows that it also behaves like a third person singular pronoun in this respect. Example (370) shows that the two forms *u* and *zich* are often interchangeable. However, use of the reflexive form *u* is infelicitous if the subject pronoun and the reflexive pronoun are adjacent, as in (370b&c). In imperative constructions like (370d), on the other hand, *zich* is excluded. Note that this cannot fully be attributed to the absence of the subject pronoun given that the imperative is intrinsically second person; since *zich* is only used in the polite form, this should in principle suffice to indicate that the polite form is intended.

- (370) a. U heeft u/zich vergist.  
 you have REFL mistaken  
 'You are mistaken.'
- b. Ik denk dat u zich/?u vergist heeft.  
 I think that you REFL mistaken has
- c. Waarschijnlijk heeft u zich/?u vergist.  
 probably have you REFL mistaken
- d. Vergis u/\*zich niet!  
 mistake REFL not

If the antecedent of the reflexive pronoun is plural, two interpretations are often possible. Example (371), for example, can either refer to a situation in which the boys present themselves as a group (e.g., *we are The Tramps*), or to a situation in which each of the boys introduces himself. These interpretations depend on the interpretation of the plural subject, which may have either a collective or a distributive interpretation; cf. Section 5.1.1.4.

- (371) *De jongens* stelden *zichzelf* voor.  
 the boys introduced themselves prt.

The reflexive counterpart of the generic personal pronoun *men* is the third person form *zich(zelf)*. The reflexive forms used with the generic personal pronouns *je* and *ze* are, respectively, *je(zelf)* and *zich(zelf)*. Some examples are given in (372); see 5.2.1.1.1 for a discussion of these generic pronouns.

- (372) Als je/men gezond wil blijven, ...  
 if you/one healthy want stay ...
- a. ... dan moet *men* *zich* goed verzorgen.  
 ... then must one REFL well look.after
- b. ... dan moet *je* *je* goed verzorgen.  
 ... then should you REFL well look.after  
 'If one wants to keep healthy, one has to look after oneself.'

Occasionally, the form '*mzelf*' is used as a reflexive pronoun within noun phrases, as in (373); the restrictions on its use will not be discussed here, but in Section 2.2.5.2.

- (373) a. \*Ik bekeek een foto van zichzelf/'mzelf.  
 I looked.at a picture of himself
- b. Jan<sub>i</sub> bekeek een foto van zichzelf<sub>i</sub>/'\*mzelf<sub>i</sub>.  
 Jan looked.at a picture of himself

## *II. The reciprocal pronoun elkaar 'each other'*

Dutch has only one reciprocal pronoun, which is used for all persons and genders. The form of this pronoun is *elkaar* (in some varieties of Dutch, the form *mekaar* is used). Generally, it is used with a syntactically plural antecedent, that is, an antecedent that triggers plural agreement on the verb. This is illustrated in (374).

- (374) • Plural antecedent of a reciprocal pronoun
- a. *Jij en ik* beminnen *elkaar*.  
you and I love each.other
  - b. *Jan en Marie* sloegen *elkaar*.  
Jan and Marie hit each.other

There are, however, exceptions to the general rule that the antecedent must be syntactically plural. The examples in (375), for instance, show that the generic indefinite/generic pronouns *men* and *je* can act as the antecedent of a reciprocal pronoun, despite the fact that they are syntactically singular.

- (375) • Indefinite antecedent of a reciprocal pronoun
- a. *Men* moet *elkaar* helpen.  
one must each.other help  
'People should help each other.'
  - b. *Je* moet *elkaar* vertrouwen.  
you must each.other trust  
'People should trust each other.'

Example (376a) further shows that collective nouns like *stel* 'couple' can sometimes also be used as the antecedent for *elkaar*. This is, however, not a general property of the collective nouns, as will be clear from the markedness of (376b).

- (376) • Singular antecedent of a reciprocal pronoun
- a. *Het stel* kuste *elkaar*.  
the couple kissed each.other
  - b. \**De menigte* kuste *elkaar*.  
the crowd kissed each.other

Other potential cases involving a singular antecedent of *elkaar* are given in (377). It is not so clear, however, whether the subject really acts as an antecedent of the reciprocal given that expressions like *uit elkaar gaan* 'to disperse/to divorce' and *in elkaar vallen/zakken* 'to collapse' have an idiomatic flavor. One potential argument for assuming that we are dealing with idioms is that the notion of "reciprocity" is absent in the meaning of these examples. The discussion below will show, however, that this may also be the case in non-idiomatic examples.

- (377) a. *De menigte/het stel* ging uit elkaar.  
the crowd/the couple went out each.other  
'The crowd dispersed/the couple divorced.'
- b. *Het kaartenhuis* viel in elkaar.  
the house.of.cards fell in each.other  
'The house of cards collapsed.'
- c. *De man* zakte in elkaar.  
the man sank in each.other  
'The man collapsed.'

That the notion of "reciprocity" is an important ingredient of the meaning of the pronoun *elkaar* is clear from the following experiment. If we invent a new verb, say

*knurven* ‘to knurf’, the first interpretation that will come to mind for a sentence like *Jan en Marie knurven elkaar* ‘Jan and Marie are knurving each other’ is that it implies that both “Jan is KNURVing Marie” and “Marie is KNURVing Jan” are true; similarly a sentence like *De jongens knurven elkaar* ‘The boys are knurving each other’ will be taken to imply that each of the boys is knurving the others.

Nevertheless it seems that the notion of “reciprocity” may be absent when we are dealing with asymmetric predicates. Examples of such asymmetric predicates can be found in clauses containing locational or temporal phrases like *to sit in front of*: if Jan is sitting in front of Marie, it immediately follows that Marie does not sit in front of Jan. The examples in (378) show that *elkaar* can nevertheless be used with such predicates.

- (378) • Non-reciprocal interpretation of *elkaar*
- a. *Jan en Marie zitten achter elkaar.*  
Jan and Marie sit behind each.other
  - b. *De jongens gingen na elkaar weg.*  
the boys went after each.other away  
‘The boys left one after the other.’
  - c. *Ik stapel de dozen op elkaar.*  
I pile the boxes on each.other  
‘I am piling the boxes, one on top of the other.’

The examples in (379) show that constructions like these do not always yield an acceptable result. Possibly, the difference in acceptability between (378) and (379) is due to the fact that in (379) the intended relation can simply be expressed by means of the symmetric preposition *naast* ‘next-to’, whereas Dutch lacks symmetric prepositions that could express the intended relations in (378). To our knowledge, differences like these have never been systematically investigated.

- (379) a. \**Jan en Marie zitten links van elkaar.*  
Jan and Marie sit to.the.left of each.other  
‘Jan and Marie are sitting to the left of each other.’
- b. ??*Ik leg de dozen rechts van elkaar.*  
I put the boxes to.the.right of each.other  
‘I put the boxes to the right of each other.’

### III. Binding

A satisfactory discussion of reflexive, reciprocal, and referential personal pronouns implies that some attention must be paid to the syntactic constraints on their interpretation: it is not the case that they can be coreferential with just any noun phrase in the sentence. These syntactic restrictions on what has become known as BINDING have been in the center of much generative research of the last forty years, and it seems impossible to do full justice to this research within the confines of this study on nouns and their projections. Nevertheless, although we plan to discuss this topic more extensively elsewhere, we still want to highlight some of the results of this research here; see Broekhuis (1994) for a preliminary version of the more exhaustive discussion of this issue.

### A. The classical version of the Binding Theory

Most of the research on binding is based on the empirical observation that English referential and reflexive personal pronouns are in complementary distribution. The same thing holds for the Dutch referential and complex reflexive pronouns. This is illustrated in the primeless examples in (380a&b), where coreferentiality is indicated by means of italics. The primed examples serve the purpose of showing that referential phrases normally cannot be used when a referential or reflexive pronoun is possible; these examples are excluded on the intended reading, according to which *Jan* and *de jongen* refer to the same individual.

- (380) a. Ik denk dat *Jan* *zichzelf*/\**hem* bewondert.  
 I think that Jan himself/\*him admires  
 'I think that Jan admires himself.'  
 a'. \*Ik denk dat *Jan* *de jongen* bewondert.  
 I think that Jan the boy admires  
 b. *Jan* denkt dat ik *hem*/\**zichzelf* bewonder.  
 Jan thinks that I him/himself admire  
 'Jan thinks that I admire him.'  
 b'. \**Jan* denkt dat ik *de jongen* bewonder.  
 Jan thinks that I the boy admire

Data like (380) were accounted for by means of Binding Theory, which found its classical formulation in the so-called binding conditions proposed in Chomsky (1981). Although alternative proposals have been formulated since then, we will take the somewhat simplified formulation of these conditions in (381) as point of departure for our discussion.

- (381) • Classic Binding conditions
- Reflexive and reciprocal personal pronouns are bound within their local domain.
  - Referential personal pronouns are free (= not bound) within their local domain.
  - Referential noun phrases like *Jan* or *de jongen* 'the boy' are free.

Let us start by clarifying some of the notions used in these conditions. A noun phrase is said to be bound when it is coreferential with a c-commanding antecedent. The notion of c-command refers to an asymmetric syntactic relation between the constituents in a sentence. Although the relation is generally defined in structural terms, it also seems possible to express it by means of the hierarchy in (382), where  $A > B$  indicates that A c-commands B and everything that is embedded in B.

- (382) C-command hierarchy:  
 subject > direct object > indirect object > PP-complement > adjunct

We will apply the notions of binding and c-command to the examples in (380). We can say that the reflexive pronoun *zichzelf* in (380a) is bound by the noun phrase *Jan* given that the latter is a subject and the former a direct object. We can also say that the referential pronoun *hem* in (380b) is bound by matrix subject *Jan* given that the latter c-commands the direct object sentence that contains the pronoun (recall that  $A > B$  indicates that A c-commands B and everything that is embedded in B).

Now consider again the three binding conditions in (381), which are normally referred to as binding conditions A, B and C. The fact that example (380b') is ungrammatical on the intended reading shows that c-command does not suffice to license binding: binding condition C expresses this by saying that a referential expression cannot be bound at all, which, of course, correctly excludes (380b'). Binding conditions A and B further express that noun phrases that can in principle be bound may differ with respect to the syntactic domain in which this is possible. If we assume for the moment that the relevant domain is the minimal clause in which we find the bound element, the data in (380a&b) will follow: in (380a) the antecedent *Jan* is within the local domain of the pronoun, and binding conditions A and B predict that a reflexive pronoun can, but a referential pronoun cannot be bound by *Jan*; in (380b) the antecedent *Jan* is not within the local domain of the pronoun, and binding conditions A and B therefore predict that a referential pronoun can, but a reflexive pronoun cannot be bound by *Jan*. This derives the complementary distribution of the referential and reflexive personal pronouns illustrated in (380a&b).

The c-command hierarchy in (382) in tandem with binding condition A predicts that a subject can be the antecedent of any reflexive/reciprocal pronoun functioning as an (in)direct object, a PP-complement or an °adjunct in the same clause. The examples in (383) show that this is indeed the case. The hierarchy (382) in tandem with binding condition B also predicts that the referential pronoun *ze* 'them' cannot substitute for the reflexive/reciprocal under the intended reading; this is also true but will go unillustrated here.

- (383) • Subject antecedents
- a. *Jan en Marie* bekeken zichzelf/elkaar.  
Jan and Marie looked.at themselves/each.other
  - b. *Jan en Marie* gaven zichzelf/elkaar graag cadeautjes.  
Jan and Marie gave themselves/each.other gladly presents
  - b'. *Jan en Marie* gaven een cadeautje aan zichzelf/elkaar.  
Jan and Marie gave a present to themselves/each.other
  - c. *Jan en Marie* zorgen voor zichzelf/elkaar.  
Jan and Marie take.care for themselves/each.other  
'Jan and Marie look after themselves/each other.'
  - d. *Jan en Marie* spraken namens zichzelf/elkaar.  
Jan and Marie spoke on.behalf.of themselves/each.other

The c-command hierarchy in (382) in tandem with binding condition A predicts that a direct object can be the antecedent of any reflexive/reciprocal pronoun functioning as an indirect object, a PP-complement or an adjunct in the same clause, but crucially not of the subject. The examples in (384) show that this is indeed the case. The hierarchy in (382) in tandem with binding condition B also correctly predicts that the referential pronoun *ze* 'them' cannot substitute for the reflexive/reciprocal under the intended reading, but this will again go unillustrated here. The diacritic "\$" indicates that the example is odd for reasons not related to syntax.

(384) • Direct object antecedents

- a. \**Zichzelf/Elkaar* zag/zagen *hen*.  
themselves/each.other saw<sub>sg</sub>/saw<sub>pl</sub> them
- b. Ik stelde *de meisjes* aan *ⁱzichzelf/elkaar* voor.  
I introduced the girls to themselves/each.other prt.
- c. Hij speelde *de meisjes* tegen *ⁱzichzelf/elkaar* uit.  
He played the girls against themselves/each.other prt.  
'He played the girls off against themselves/each other.'
- d. Ik waarschuwde *de meisjes* voor *zichzelf/elkaar*.  
I warned the girls for themselves/each.other  
'I warned the girls about themselves/each other.'

The other predictions that follow from the binding conditions in (381) in tandem with the c-command hierarchy in (382) are also on the right track, but we will not discuss this here; see Broekhuis (1994) for detailed description.

*B. Personal pronouns that are part of the complement of a small clause*

Although Chomsky's Binding Theory is successful as far as the complex form of the reflexive and the reciprocal is concerned, the simplex reflexive introduces a number of new and intricate problems that cannot straightforwardly be accounted for by means of the three binding conditions in (381). The simplex reflexive is typically used in inherent reflexive constructions like (385), but can also be used in certain argument positions; see Everaert (1986) for a good, virtually exhaustive, overview of the distribution of the simplex reflexives.

- (385) a. Jan vergist *zich*/\**Marie*  
Jan mistakes REFL/Marie  
'Jan is mistaken.'
- b. Jan schaamt *zich*/\**Marie*  
Jan shames REFL/Marie  
'Jan is ashamed.'

That the binding conditions in (381) must be complicated in order to account for the binding behavior of the simplex reflexive *zich* will be immediately clear from the fact that it cannot be bound by a co-argument, whereas this is typically the case with complex reflexives and reciprocals: in this respect, the simplex reflexive behaves like the referential pronoun *hem*.

(386) • Co-argument as the antecedent of *zich/zichzelf/hem* (I)

- a. *Marie* bekeek *zichzelf*/\**zich*/\**haar*.  
Marie looked.at herself/REFL/her
- b. *Jan* gaf *zichzelf*/\**zich*/\**hem* graag cadeautjes.  
Jan gave himself/REFL/him gladly presents
- c. *Jan* gaf een cadeautje aan *zichzelf*/\**zich*/\**hem*.  
Jan gave a present to himself/REFL/hem

The examples in (387) show that the simplex reflexive *zich* also behaves differently from the complex reflexives and reciprocals in examples containing a predicative locational PP: in (387a) the reciprocal must be bound by the °logical SUBJECT of the



predicate, *de honden* ‘the dogs’, whereas the simplex reflexive cannot be. Example (387b) shows that the latter must instead be bound by the subject of the clause. Again, the simplex reflexive behaves like the referential pronouns: the weak pronoun *'m* can also be bound by the subject of the clause in this construction.

(387) • Co-argument as the antecedent of *zich/zichzelf/hem* (II)

- a. Jan houdt [<sub>SC</sub> *de honden* bij *elkaar/\*zich/\*ze*]  
 Jan keeps the dogs with each.other/REFL/them  
 ‘Jan keeps the dogs together.’
- b. Jan houdt [<sub>SC</sub> *de honden* bij *zich/'m/\*zichzelf*].  
 Jan keeps the dogs with REFL/him/himself  
 ‘Jan keeps the dogs with him.’

The examples in (387) show that although the simplex reflexive and weak referential pronoun cannot be bound by their co-argument *de honden*, they can be bound by the noun phrase *Jan* within their minimal clause. From this we must conclude that our earlier assumption that the local domain is the minimal clause containing the pronoun is wrong: in (387) it is instead constituted by the phrase marked as °small clause (SC), which contains both the locational predicate and its SUBJECT. A second conclusion that can be drawn from (387) is that the simplex reflexive *zich* behaves like the referential pronouns in not being able to be bound with its local domain. Nevertheless the simplex reflexive does pattern with the reflexives and reciprocals in that it must have an antecedent within its minimal clause; the referential pronoun, on the other hand, may remain free within its minimal clause and refer to some contextually determined antecedent, as in (388c), or refer to some antecedent in some higher matrix clause, as in (388c’).

- (388) a. De hond legde [<sub>SC</sub> *de botten* naast *elkaar/\*zich/\*ze*].  
 the dog put the bones next.to each.other/REFL/them
- b. De hond legde [<sub>SC</sub> *het bot* naast *zich/'m/\*zichzelf*].  
 the dogs put the bone next.to REFL/him/himself
- c. Ik legde [<sub>PP</sub> *het bot* naast *'m/\*zich/\*zichzelf*].  
 I put the bone next.to him/REFL/each.other
- c’. De hond zag [<sub>clause</sub> *dat ik* [<sub>SC</sub> *het bot* naast *'m/\*zich/\*zichzelf*] *legde*].  
 the dog saw that I the bone next.to him/REFL/each.other put  
 ‘The dog saw that I put the bone next to it.’

The (c)-examples in (388) are crucial for our present purpose. Example (388a) simply shows again that whereas a reciprocal can be bound by the SUBJECT of a predicative PP, the simplex reflexive and referential pronoun cannot. Example (388b) shows that whereas a reflexive cannot be bound by the subject of the embedded clause, the simplex reflexive and referential pronouns can, although it might be useful to point out that *zichzelf* is only blocked when it has a regular accent; when it has contrastive accent on *zelf*, we are dealing with simplex reflexive *zich* strengthened by the contrastive element *zelf* ‘himself/herself/themselves’, which we also find with other noun phrases; cf. *Jan heeft met Marie ZELF gesproken* ‘Jan has spoken to Marie herself’; cf. Section 5.2.3.2.5. The (c)-examples in (388) show, however, that the simplex reflexive and the referential pronoun differ in that

the former must be bound within its minimal clause, whereas the latter can remain free or be bound by some element in a higher clause.

The discussion above leads to the conclusion that it is necessary to distinguish a larger set of local domains, as in (389); in this table “bound” indicates that the relevant noun phrase must be bound within the given domain, “free” indicates that it must remain free in the given domain, and “optional” that it may but need not be bound within the given domain. Note that there are two implicational relations involved: when some element must be bound in its domain I, it must also be bound in its domain II and the sentence; when some element must be free within the sentence it must also be free within its domains I and II. The cells the values of which can be predicted from these implicational relations are shaded; in order to see whether the binding conditions are satisfied, it suffices to inspect whether the conditions in the cells without shading are satisfied.

(389) Binding domains for the complement of a small clause predicate (version 1)

|                                                     | DOMAIN I | DOMAIN II | SENTENCE |
|-----------------------------------------------------|----------|-----------|----------|
| COMPLEX REFLEXIVE &<br>RECIPROCAL PERSONAL PRONOUNS | bound    | bound     | bound    |
| SIMPLEX REFLEXIVE PERSONAL PRONOUNS                 | free     | bound     | bound    |
| REFERENTIAL PERSONAL PRONOUNS                       | free     | optional  | optional |
| REFERENTIAL EXPRESSION                              | free     | free      | free     |

Now, if we provisionally assume that the local domain I of a pronoun is defined as the first constituent that contains both the pronoun and a SUBJECT, whereas local domain II is defined as the minimal clause of the pronoun, the data in (386) to (388) will follow. In (386), the minimal clause of the pronoun is also the first constituent that contains a SUBJECT: domain I and II therefore coincide, and, consequently, it is correctly predicted that only the complex reflexive and reciprocal personal pronouns can be bound by the subject of the clause. In (387) domain I of the pronoun is constituted by the predicative PP, whereas domain II is constituted by the full sentence: consequently, we predict that the complex reflexive and reciprocal personal pronouns must find an antecedent within the PP, whereas it is instead the subject of the sentence that acts as the antecedent for the simplex reflexive and referential pronouns. The (c)-examples of (388), in which we find the same local domains as in (387), show that the referential personal pronoun can remain free or be bound by an antecedent external to the minimal clause, but the simplex reflexive personal pronoun cannot.

The claim that local domain I is the first constituent that contains both the noun phrase and a SUBJECT predicts that we will find facts similar to those shown in (387) and (388) with adjectival and nominal predicates. The examples in (390) show that this prediction is partly false. The primeless examples show that it is indeed correctly predicted that the SUBJECT of the small clause can bind the complex but not the simplex reflexive, but the primed examples show that it is incorrectly predicted that the simplex reflexive pronoun can be bound by the subject of the clause. The fact that the referential pronoun can be bound by the subject of the clause is, of course, in line with the predictions.

- (390) a. Kees acht [SC Jan verliefd op zichzelf/\*zich].  
Kees considers Jan in.love on himself/REFL  
‘Kees believes Jan to be in love with himself.’  
a’. Kees acht [SC Jan verliefd op hem/\*zich].  
Kees considers Jan in.love on him/REFL  
b. Kees vindt [SC Jan een probleem voor zichzelf/\*zich].  
Kees considers Jan a problem for himself/REFL  
‘Kees believes Jan to be a problem for himself.’  
b’. \*Kees vindt [SC Jan een probleem voor hem/\*zich].  
Kees considers Jan a problem for him/REFL

The fact that the wrong predictions are made for the simplex reflexive pronoun shows that the definition of the two domains is not as simple as we thought earlier. Since we do not want to go into the precise definitions of local domains I and II, we will simply enumerate which constituents may function as such. Since small clause APs/NPs function both as domain I and domain II of the pronoun, we now correctly predict that the simplex reflexive pronoun cannot be bound by the subject of the clause in (390) because the latter is external to its domain II (the small clause); the referential pronoun, on the other hand, can be bound by the subject of the clause because the latter is external to its domain I.

(391) Binding domains for the complement of a small clause predicate (version 2)

|                                                     | DOMAIN I:<br>SC-PP<br>SC-AP<br>SC-NP | DOMAIN II:<br>MINIMAL CLAUSE<br>SC-AP<br>SC-NP | SENTENCE |
|-----------------------------------------------------|--------------------------------------|------------------------------------------------|----------|
| COMPLEX REFLEXIVE &<br>RECIPROCAL PERSONAL PRONOUNS | bound                                | bound                                          | bound    |
| SIMPLEX REFLEXIVE PERSONAL PRONOUNS                 | free                                 | bound                                          | bound    |
| REFERENTIAL PERSONAL PRONOUNS                       | free                                 | optional                                       | optional |
| REFERENTIAL EXPRESSION                              | free                                 | free                                           | free     |

The notion of minimal clause must be made a bit more precise in light of the fact that simplex reflexives that are part of the complement of an °AcI-construction can be also be bound by the subject of a matrix clause. Consider the examples in (392). Example (392a) shows that the infinitival clause functions as the local domain I of the pronouns: the SUBJECT of this infinitival clause may bind the complex reflexive, but not the simplex reflexive and referential pronoun. The matrix clause clearly functions as local domain II given that the subject of this clause may bind the simplex reflexive and referential pronouns. This may give rise to the idea that the complement of an AcI-construction is actually not a “true” infinitival clause but a small clause with a VP-predicate, that is, a verbal projection without finite or infinitival tense.

- (392) a. Kees zag [<sub>SC</sub> Peter op zichzelf/\*zich/\*'m schieten].  
 Kees saw Peter at himself/REFL/him shoot  
 'Kees saw that Peter shot at himself.'  
 b. Kees zag [<sub>SC</sub> Peter op zich/'m/\*zichzelf schieten].  
 Kees saw Peter at REFL/him/himself shoot  
 'Kees saw Peter shoot at him.'

A complication arises, however, when the pronoun functions as the direct object of the verbal small clause: the primeless examples in (393) show that *zich* cannot be used in these cases, the only option being the use of a referential pronoun. Although it is not clear what may cause the impossibility of the simplex reflexive in examples like these (see Broekhuis, 1992, for some speculations), it must be noted that the primed examples, in which the SUBJECT of the small clause is left implicit, are fully acceptable with *zich*.

- (393) a. Kees hoorde [<sub>SC</sub> mij hem/\*zich roepen].  
 Kees heard me him/REFL call  
 'Kees heard me calling him.'  
 a'. Kees hoorde [<sub>SC</sub> PRO hem/zich roepen].  
 Kees heard REFL/him call  
 'Kees heard me calling him.'  
 b. Kees liet [<sub>SC</sub> mij hem/\*zich een klap geven].  
 Kees let me him/REFL a blow give  
 'Kees let me hit him.'  
 b'. Kees liet [<sub>SC</sub> PRO hem/zich een klap geven].  
 Kees let REFL/him a blow give  
 'Kees let me hit him.'

Let us therefore put aside the problem of the primeless examples in (393), and accept the examples in (392) and the primed examples of (393) as sufficient evidence for the claim that the infinitival clauses in AcI-constructions are indeed small clauses with a VP predicate. We can summarize the data discussed in this section by means of the table in (394).

(394) Binding domains for the complement of a small clause predicate (final version)

|                                                     | DOMAIN I:<br>SC-PP<br>SC-AP<br>SC-NP<br>SC-VP | DOMAIN II:<br>MINIMAL CLAUSE<br>SC-AP<br>SC-NP | SENTENCE |
|-----------------------------------------------------|-----------------------------------------------|------------------------------------------------|----------|
| COMPLEX REFLEXIVE & RECIPROCAL<br>PERSONAL PRONOUNS | bound                                         | bound                                          | bound    |
| SIMPLEX REFLEXIVE PERSONAL PRONOUNS                 | free                                          | bound                                          | bound    |
| REFERENTIAL PERSONAL PRONOUNS                       | free                                          | optional                                       | optional |
| REFERENTIAL EXPRESSION                              | free                                          | free                                           | free     |

*C. Personal pronouns that function as the SUBJECT of a small clause*

The notion of local domain is a relative one and only defined for a noun phrase in a certain structural position in the clause: the phrases indicated in the headings of table (394) function as local domains for noun phrases in the complement position of a small clause predicate, but not necessarily for other noun phrases. This will become clear when we consider the binding behavior of SUBJECTS of small clause predicates. The examples in (395) show that in this position simplex reflexives are not in complementary distribution with the complex reflexive and reciprocal personal pronouns. In principle this can be accounted for by assuming that SUBJECTS of small clauses do not have a local domain I (see Broekhuis, 1992, for a formal proposal): if so, the pronouns in the examples in (395) are all bound within domain II, as required.

(395) • *Zich* (and *zichzelf*) as the SUBJECT of a small clause predicate

- a. *Zij* wierpen [<sub>SC</sub> *zich/elkaar* voor de trein].  
they threw REFL/each.other in.front.of the train
- b. *Kees* acht [<sub>SC</sub> *zich/zichzelf* verliefd op Jan].  
Kees considers REFL/himself in.love with Jan  
'Kees believes himself to be in love with Jan.'
- c. *Zij* vindt [<sub>SC</sub> *zich/zichzelf* een bekwaam taalkundige].  
they believe REFL/himself a competent linguist
- d. *Zij* zagen [<sub>SC</sub> *zich/elkaar* nog niet vertrekken].  
they saw REFL/each.other not yet leave

Note that the simplex and complex only alternate in examples like (395) where they can be replaced by a referential noun phrase: when a referential phrase cannot be used, as in (396), it is normally the simplex that is used. Note that the percentage sign indicates that the unacceptability of the use of the referential pronoun *haar* 'her' is based on our knowledge of the world:

- (396) a. *Hij* schreeuwt *zich/\*zichzelf/%haar* schor.  
he cries REFL/himself/her hoarse  
'He works himself to death.'
- b. *Hij* drinkt *zich/\*zichzelf/%haar* zat/een delirium.  
he drinks REFL/himself/her drunk/a delirium  
'He drinks such that he gets very drunk/a delirium.'

*D. A potential problem: dative reflexives*

The previous subsections have shown that simplex and complex reflexives differ in that the former cannot be bound by a co-argument. Example (397) shows that this also accounts for the fact that dative noun phrases normally cannot appear as simplex reflexives.

- (397) *Jan* gaf *\*zich/zichzelf* een boek.  
Jan gave REFL/himself a book  
'Jan gave a book to himself.'

A potential problem is, however, that there two cases in which dative reflexives can be bound by the subject of their clause. Example (398a) illustrates the case in which the simplex reflexive functions as a possessive dative. Examples like these will be compatible with the no co-argument restriction on the binding of simplex reflexives when we adopt the not unlikely assumption that the dative possessor is not licensed by the verb, but by the possessee; cf. Broekhuis & Cornips (1997). One argument in favor of this position is that (398a) is synonymous with (398b), in which the possessive relation is expressed by a prenominal possessor. We refer to Section V3.3.1.4 for more discussion.

- (398) a. Hij zette Peter/zich een hoed op het hoofd. [possessive dative]  
 he put Peter/REFL a hat on the head  
 'He put a head on Peter's/his head.'
- b. Hij zette een hoed op Peters/zijn hoofd. [prenominal possessor]  
 he put a hat on Peter's/his head  
 'He put a head on Peter's/his head.'

The second case is illustrated by the examples in (399), in which the dative has the semantic function of a benefactive. Although benefactives are often considered arguments of the verb, the simplex reflexive can again be bound by the subject of the clause. The claim that benefactives are arguments of the verb is, however, not uncontroversial as will be clear from the fact that it is only in the second edition of the *Algemene Nederlandse Spraakkunst* that they are unambiguously treated as indirect objects (Haeseryn et al. 1997: 1160ff.); the first edition (Geerts et al. 1984: 882ff.) treated them primarily as adverbial phrases; see Section V3.3.1.5 for more discussion. The adjunct analysis may, in fact, be supported by data like (399).

- (399) a. Hij schonk Peter/zich een borrel in.  
 he poured Peter/REFL a drink prt.  
 'He poured Peter/himself a drink out.'
- b. Jan verschaftte Peter/zich een alibi.  
 Jan provides Peter/REFL an alibi  
 'Jan provided Peter/himself with an alibi.'

#### *E. Personal pronouns that function as part of an argument*

The examples in (400) show that the pronouns also exhibit different behavior when they are embedded in an argument noun phrase. Example (400a) shows that complex reflexives and reciprocals can be bound by the subject of the clause when the noun phrase is indefinite, which suggests that the complete sentence functions as domain I. The examples in (400b&c) show that when the noun phrase contains a possessive pronoun, complex reflexives and reciprocals must be bound by the possessor, which suggests that it is now the noun phrase that serves as domain I. The fact that the simplex reflexive cannot be bound by the subject of the clause suggests that the noun phrase also functions as domain II. Consequently, only the referential pronoun can enter in a binding relation with the subject of the clause; see Section 2.2.5.5.2 for a more detailed discussion of examples like these.

- (400) a. *Zij bekeken een foto van zichzelf/elkaar/\*zich/\*ze.*  
 they looked.at a picture of themselves/each.other/REFL/them  
 b. *Zij bekeken hun foto van zichzelf/elkaar/\*zich/\*ze.*  
 they looked.at their picture of themselves/each.other/REFL/them  
 c. *Zij bekeken mijn foto van ze/\*zich/\*zichzelf/\*elkaar.*  
 they looked.at my picture of them/REFL/themselves/them

#### *F. Personal pronouns that function as part of an adverbial phrase*

When the pronoun is part of an adverbial phrase and bound by the subject in its minimal clause, it normally takes the shape of a complex reflexive or a reciprocal pronoun, whereas simplex reflexive and referential personal pronouns are normally excluded. Still, there are certain cases in which it is the simplex reflexive that is used.

- (401) a. *Jan en Marie spraken namens zichzelf/elkaar/\*zich/\*ze.*  
 Jan and Marie spoke on.behalf.of themselves/each.other/REFL/them  
 b. *Jan en Marie keken voor/achter zich/\*ze/\*zichzelf/\*elkaar*  
 Jan and Marie looked in.front.of/behind REFL/them/themself/each.other

One possible way of accounting for the contrast between (401a) and (401b) is to take the prosodic properties of the two kinds of prepositions into account. Koster (1987) observed that prepositions such as *voor* and *achter* may take either a full or a reduced pronoun as their complement, as in *achter mij/me* ‘behind me’, whereas the object of prepositions such as *namens* must be stressed, as in *namens mij/\*me* ‘on behalf of me’. Since simplex reflexives and bound referential pronouns are normally unstressed, this would immediately account for the fact that they cannot occur in (401a). However, given the fact that the object of the prepositions *voor* and *achter* can be either a non-reduced or a weak pronoun, this proposal fails to account for the fact that *zichzelf* and *elkaar* cannot be used in (401b). Resorting to the prosodic features of these constructions, therefore, offers only a partial explanation of the contrast observed in (401).

#### *G. Conclusion*

This section has given a necessarily incomplete overview of some of the most conspicuous binding properties of the reflexive and referential personal pronouns. Some of the generalizations have been phrased in terms of several types of anaphoric domains that can be distinguished. An important issue is, of course, how these generalizations can be derived from more general principles. Since this is not the place to discuss this, we simply mention a number of important publications. The idea of formulating different local domains first came up in Vat (1980) and Koster (1987). Everaert (1986), which probably provides the most extensive overview of the binding behavior of the simplex reflexive *zich* up to the present day, has extensively discussed the relevance of the notion of co-argument. Broekhuis (1992) took up some of his ideas and extended Chomsky’s (1981) Binding Theory by defining different types of local domains in terms of more primitive notions available in that framework. An influential proposal of a different sort is the so-called reflexivity framework (Reinhart & Reuland 1993), which assumes that the

morpheme *-zelf* is needed to mark a verb as reflexive, which immediately predicts that *zichzelf* obligatorily appears when we are dealing with binding between co-arguments (but which may require additional stipulations in order to account for the fact that *zichzelf* may also occur in other environments and exhibit behavior similar to the reciprocals). We refer to Zwart (2011:section 13.1) for a more extensive review of the more recent theoretical literature.

### 5.2.2. Possessive pronouns

This section discusses the possessive pronouns. Section 5.2.2.1 starts with a discussion of several semantic subtypes of possessive pronouns. Section 5.2.2.2 discusses the interpretation of the possessive pronouns, and argues that the core meaning of the referential possessive pronouns consists of two parts: the first part is similar to that of the definite article and the second part, which is also found with the other subtypes, introduces a partitioning of the denotation set of the head noun they modify. This section also discusses the types of relationship that the possessive pronoun and the head noun enter into that bring about the aforementioned partitioning. Some referential possessive pronouns have a strong and a weak (phonetically reduced) form, and Section 5.2.2.3 discusses the restrictions on the use of these two forms. Section 5.2.2.4 briefly goes into the binding properties of the possessive pronouns. Section 5.2.2.5, finally, discusses a number of special cases: the functional use of the weak referential possessive pronouns in examples like *Jan z'n boek* 'Jan's book', the use of the inflected form of the referential possessive pronouns in constructions like *de mijne* 'mine', and some idiomatic constructions containing possessive pronouns.

#### 5.2.2.1. Classification

In what follows we will assume that Dutch possessive pronouns function as determiners. The main reason for doing so is that they are in complementary distribution with the articles, as is shown in Table 9.

Table 9: The complementary distribution of articles and possessive pronouns

|                                 | [-NEUTER]                                        | [+NEUTER]                                        | PLURAL                                             |
|---------------------------------|--------------------------------------------------|--------------------------------------------------|----------------------------------------------------|
| ARTICLE                         | <i>de fiets</i><br>'the bike'                    | <i>het boek</i><br>'the book'                    | <i>de boeken</i><br>'the books'                    |
| POSSESSIVE PRONOUN              | <i>mijn fiets</i><br>'the bike'                  | <i>mijn boek</i><br>'my books'                   | <i>mijn boeken</i><br>'my books'                   |
| ARTICLE +<br>POSSESSIVE PRONOUN | * <i>de mijn fiets</i><br>* <i>mijn de fiets</i> | * <i>het mijn boek</i><br>* <i>mijn het boek</i> | * <i>de mijn boeken</i><br>* <i>mijn de boeken</i> |

This complementary in distribution can be accounted for by assuming that the two compete for the same position in the nominal structure, the head position of the DP. It must be noted, however, that the claim that possessive pronouns are determiners is not cross-linguistically valid; in languages like Hungarian, for instance, possessive pronouns can co-occur with articles; see Szabolcsi (1983) for the Hungarian data, and Alexiadou et al. (2007) for a more general discussion.



The introduction to this section on pronouns (5.2) has shown that the possessive pronouns can be divided into approximately the same semantic subclasses as the personal pronouns, although there is no set of reflexive possessive pronouns. The semantic subclassification given there is shown in (402a-e). We will see, however, that we need to add the demonstrative possessive pronoun *diens* in (402f) to this classification.

- (402)
- Semantic subcategories of possessive pronouns

a. Referential: *Zijn broer is ziek.* ‘His brother is ill.’

b. Interrogative: *Wiens broer is ziek?* ‘Whose brother is ill?’

c. Quantificational: *Iemands broer is ziek.* ‘Someone’s brother is ill.’

d. Relative: *de jongen wiens broer ziek is* ‘the boy whose brother is ill’

e. Reciprocal: *Zij wassen elkaars broer.* ‘They wash each other’s brother.’

f. Demonstrative: *Jan en diens hond* ‘Jan and his dog’

5.2.2.1.1. *Referential possessive pronouns*

As with the referential personal pronouns, discussed in Section 5.2.1, the form of the referential possessive pronouns depends on person, number and gender. With the exception of the second person polite form *uw*, the singular forms can be either STRONG or WEAK. In the former case the nucleus of the pronoun is a long vowel or a diphthong and can be stressed, whereas in the latter case the nucleus is a schwa and hence necessarily unstressed. The plural forms, on the other hand, do not have a weak form, with the exception of the second person plural form *je*: we will turn to this form in Section 5.2.2.3, where we will discuss the distinction between the weak and strong forms more extensively. Table 10 gives the full set of strong and weak possessive pronouns.

Table 10: *Referential possessive pronouns*

|                        |            | SINGULAR    |               | PLURAL          |             |
|------------------------|------------|-------------|---------------|-----------------|-------------|
|                        |            | STRONG      | WEAK          | STRONG          | WEAK        |
| 1 <sup>ST</sup> PERSON |            | <i>mijn</i> | <i>m'n/me</i> | <i>ons/onze</i> | —           |
| 2 <sup>ND</sup> PERSON | COLLOQUIAL | <i>jouw</i> | <i>je</i>     | <i>jullie</i>   | <i>(je)</i> |
|                        | POLITE     | <i>uw</i>   | —             | <i>uw</i>       | —           |
| 3 <sup>RD</sup> PERSON | MASCULINE  | <i>zijn</i> | <i>z'n/ze</i> | <i>hun</i>      | —           |
|                        | FEMININE   | <i>haar</i> | <i>d'r/'r</i> |                 |             |
|                        | NEUTER     | <i>zijn</i> | <i>z'n/ze</i> |                 |             |

For completeness’ sake, note that Haeseryn et al. (1997: 290) suggest that *d'r/'r* is also used as a weak plural third person possessive pronoun, although no examples are given. According to us, using *d'r/'r* in this way is not possible; in *Die meisjes hebben hun<sup>#</sup> d'r boeken verkocht* ‘those girls/boys have sold their books’, the strong pronoun *hun* can take the subject of the clause as its antecedent, whereas the weak form *d'r* cannot and must refer to some other female person in domain D.

Observe that there is no special possessive counterpart for the indefinite/generic personal pronoun *men*, but example (403b) shows that the weak singular second person possessive pronoun *je* can be used generically, just like the weak second

person personal pronoun *je* in (403a). This reading is not available for the strong form *jouw*.

- (403) a. In de bus moet je/<sup>#</sup>jij oppassen voor zakkenrollers.  
 in the bus must one take.care for pickpockets  
 ‘On the bus, one must beware of pickpockets.’  
 b. Je/\*Jouw gezondheid is het belangrijkste in het leven.  
 one’s health is the most important in the life  
 ‘One’s health is the most important thing in life.’

Generally speaking, referential possessive pronouns refer to [+ANIMATE] entities. This is, of course, evident for the first and second person pronouns since these refer to (referent sets including) the speaker and the listener, respectively, but it also holds for the third person pronouns. So, whereas the examples in (404a&b) have a counterpart involving a possessive pronoun, using the pronominal counterparts of (404c&d) may lead to interpretative problems.

- |          |                                               |     |                                       |
|----------|-----------------------------------------------|-----|---------------------------------------|
| (404) a. | de fiets van Jan<br>the bike of Jan’s         | a’. | zijn fiets<br>his bike                |
| b.       | de riem van Bruno<br>the leash of Bruno’s     | b’. | zijn riem<br>his leash                |
| c.       | het dak van het huis<br>the roof of the house | c’. | <sup>\$</sup> zijn dak<br>its roof    |
| d.       | de motor van de auto<br>the motor of the car  | d’. | <sup>\$</sup> zijn motor<br>its motor |

The reason why the use of (404c’&d’) may occasionally have a questionable result is connected to the fact that, when considered in isolation, the possessive pronouns in the primed examples are unanimously interpreted as [+ANIMATE], or even [+HUMAN]. This, in turn, may be related to the fact that the postnominal pronominal PP *ervan* ‘of it’ in the primed examples of (405) must be interpreted as referring to a [-ANIMATE] referent.

- |          |                                               |     |                                   |
|----------|-----------------------------------------------|-----|-----------------------------------|
| (405) a. | de fiets van Jan<br>the bike of Jan’s         | a’. | *de fiets ervan<br>the bike of.it |
| b.       | de riem van Bruno<br>the leash of Bruno’s     | b’. | *de riem ervan<br>the leash of.it |
| c.       | het dak van het huis<br>the roof of the house | c’. | het dak ervan<br>the roof of.it   |
| d.       | de motor van de auto<br>the motor of the car  | d’. | de motor ervan<br>the motor of.it |

This does not mean, however, that the possessive pronouns never have [-ANIMATE] antecedents, but only that this use is more restricted. Haeseryn et al. (1997: 291 ff.) correctly point out that the best result is obtained when the antecedent is an argument of the clause that also contains the possessive pronoun, as in (406a); more precisely, in terms of °binding, the result is fully acceptable when the possessive pronoun is bound by a [-ANIMATE] antecedent. When the two are, e.g., in different clauses, there is a certain preference to simply use a definite article instead of the

possessive pronoun, as in (406b&b'): when the reader wants to be very explicit the noun is modified by the pronominal PP *ervan* 'of it'.

- (406) a. Deze auto heeft problemen met zijn/<sup>(2)</sup>de motor.  
           this car has problem with his motor  
       b. De auto staat in de garage. De motor (ervan) moet nagekeken worden.  
           the car stands in the garage the motor of.it must prt.-checked be  
           'The car is the garage. Its motor must be checked.'  
       b'. <sup>3</sup>De auto staat in de garage. Zijn motor moet nagekeken worden.  
           the car stands in the garage his motor must prt.-checked be

Although use of a possessive pronoun is still possible in example (406b'), in many other cases the result may become highly questionable. This is illustrated in (407), adapted from Haeseryn et al. (1997: 292). Since it is not clear what factors determine the felicitousness of this use, we will leave this for future research.

- (407) a. Dit probleem is ingewikkeld. De oplossing ervan kost veel tijd.  
           this problem is complicated the solution of.it costs much time  
           'This problem is complicated. Its solution will take much time.'  
       b. <sup>\*\*?</sup>Dit probleem is ingewikkeld. Zijn oplossing kost veel tijd.  
           this problem is complicated Its solution costs much time

#### 5.2.2.1.2. *Interrogative and relative possessive pronouns*

Unlike the referential possessive pronouns, the remaining possessive pronouns are all derived from other pronominal forms. The interrogative and relative possessive pronouns, for example, are old genitive forms of the interrogative personal pronoun *wie*. First, consider the interrogative examples in (408).

- (408) a. Wiens boek is dit?  
           whose<sub>masc.</sub> book is this  
       b. Wier boek is dit?  
           whose<sub>fem.</sub> book is this  
       c. Van wie is dit boek?  
           of whom is this book

Given that the Dutch case system is archaic, it will not come as a surprise that examples like (408a&b) are pretty formal; the more colloquial way of expressing the same question is given in (408c). Nevertheless, the case-marked forms are still productively used when the noun phrase that they belong to functions as the complement of a preposition, as in (409a), which may be due to the fact that the alternative version with a possessive *van*-PP is also quite cumbersome.

- (409) a. Op wiens/wier initiatief wordt dit reisje georganiseerd?  
           on whose initiative is this trip organized  
       b. Op het initiatief van wie wordt dit reisje georganiseerd?  
           on the initiative of who is this trip organized

The examples in (410) show that case-marked forms can also be found as relative pronouns, especially in the formal register; cf. Section 3.3.2.2.2. It must be noted,

however, that in examples like (410a) the feminine form *wier* is often replaced by the masculine form *wiens*. A Google search performed in December 2008 on the strings [*de vrouw wier man*] and [*de vrouw wiens man*] gave 32 cases of the former (which include several linguistic sources) and 14 cases of the latter, which shows that the two forms are more or less chosen at random. This, in turn, strongly suggests that the genitive forms are no longer part of the living language.

- (410) a. de man [wiens vrouw ik gisteren heb ontmoet]  
           the man whose wife I yesterday have met  
       b. de vrouw [wier man ik gisteren heb ontmoet]  
           the woman whose husband I yesterday have met

#### 5.2.2.1.3. Quantificational possessive pronouns

There are three quantificational possessive pronouns, *ieders* ‘everyone’s’, *iemand*s ‘someone’s’, and *niemand*s ‘no one’s’. These are shown in the primeless examples in (411), which alternate with the primed examples. We have the impression that the use of *ieders* is somewhat formal compared to the use of the postnominal PP *van iedereen*, whereas the use of (*n*)*iemand*s is more common than *van (n)iemand*. The former claim cannot be supported by the frequency of the strings of the (a)-examples on the internet: (411a) occurs about three times as often as (411a’) but this is not telling given that our Google search provides no insight in the registers involved. It can perhaps be supported by the fact that *ieders* is sometimes replaced by the less common but regularly derived form *iedereens*: the relative frequency of the two forms on the internet is approximately 23:1. The latter claim is supported by a Google search performed in July 2008: the string [*iemand*s recht] resulted in 1050 hits, whereas the string [*het recht van iemand*] resulted in only 35 hits; the string [*niemand*s recht] resulted in 105 hits, whereas the string [*het recht van niemand*] had no result (apart from one very dubious case).

- |                       |                            |
|-----------------------|----------------------------|
| (411) a. ieders recht | a’. het recht van iedereen |
| everyone’s right      | the right of everyone      |
| b. iemands recht      | b’. het recht van iemand   |
| someone’s right       | the right of someone       |
| c. niemands recht     | c’. het recht van niemand  |
| no one’s right        | the right of no one        |

#### 5.2.2.1.4. Reciprocal possessive pronouns

One conspicuous difference between the personal and the possessive pronouns is that the latter do not have a reflexive form. This is due to the fact that, whereas a referential personal pronoun cannot be bound by a co-argument, a referential possessive pronoun can always be bound by a co-argument of the noun phrase it is part of; a special reflexive form is therefore not necessary. Having the reciprocal form of the possessive pronoun in (412c), on the other hand, is certainly useful as this pronoun adds a reciprocal meaning aspect.

- (412) a. \**Jan* bewondert *hem*.  
           Jan admires     him  
       b. *Jan* bewondert *zijn* broer.  
           Jan admires     his brother  
       c. *Zij* bewonderen *elkaars* werk.  
           they admire     each.other's work

#### 5.2.2.1.5. *Other cases*

Possessive pronouns also have a demonstrative form: the genitive masculine form *diens*. The feminine counterpart of this form is *dier*, but it seems that this form is completely obsolete: it is less common and feels extremely formal and artificial. All occurrences of *diens* can in principle be replaced by a referential possessive pronoun, but the inverse is not the case: *diens* can never refer to a subject regardless of whether this subject is part of the same clause, some higher clause, or even another sentence (Postma 1984). Whereas the pronoun *zijn* can be bound by Jan in the examples in (413), *diens* can only be used to refer to some other salient discourse entity. Coreference is indicated by means of italics.

- (413) a. *Jan* bewondert *zijn*/\**diens* broer.  
           Jan admires   his           brother  
       b. *Jan* weet dat ik *zijn*/\**diens* broer   bewonder.  
           Jan knows that I   his           brother admire  
       c. *Jan* wilde vertrekken. *Zijn*/\**Diens* auto wilde echter niet starten.  
           Jan wanted leave       his           car would however not start

This difference between the possessive and demonstrative possessive pronoun accounts for why, despite its highly formal nature, the use of *diens* is still popular in writing, since it solves certain ambiguities that may arise when we use the referential possessive pronoun. This becomes clear from the examples in (414): whereas the referential pronoun *zijn* can be interpreted either as coreferential with the subject *de vader van Jan* or the proper noun *Jan* embedded in the subject, the possessive pronoun *diens* only has the latter option. Note that the question mark in (414a') indicates that this is simply a less prominent reading.

- (414) a. *De vader van Jan* heeft *zijn* boeken weggegooid.  
           the father of Jan has his books thrown.away  
       a'. ?*De vader van Jan* heeft *zijn* boeken weggegooid.  
       b. *De vader van Jan* heeft *diens* boeken weggegooid.  
           the father of Jan has his books thrown.away  
       b'. \**De vader van Jan* heeft *diens* boeken weggegooid.

The examples so far may wrongly suggest that *diens* behaves like referential noun phrases in that it cannot have a °c-commanding antecedent. That this is actually possible is shown by the examples in (415): in (415a) a nominal indirect object functions as the antecedent of *diens* embedded in a direct object, in (415b) the direct object functions as the antecedent of *diens* embedded in a periphrastic indirect object, and in (415c) the direct object is the antecedent of *diens* embedded in an adverbial phrase. This means that the proper generalization is indeed the one given

earlier, viz., that *diens* cannot be bound by a subject. For completeness' sake, note that all examples become ambiguous when we replace *diens* by the possessive pronoun *zijn* 'his'.

- (415) a. Jan gaf *Peter* het eerste exemplaar van *diens* nieuwe boek.  
 Jan gave Peter the first copy of his new book  
 b. Jan stelde *Peter* aan *diens* nieuwe chef voor.  
 Jan introduced Peter to his new manager prt.  
 c. Jan begroette *Peter* bij *diens* aankomst op Schiphol.  
 Jan greeted Peter on his arrival at Schiphol

In (416) we give some examples that involve coordination, where coreference is expressed by means of co-indexing. The (a)-examples show that, whereas the possessive pronoun *zijn* can be interpreted as referential either with the subject of the clause or with the first conjunct of the coordinated phrase *Peter en zijn dochter*, this ambiguity is solved when we use *diens* given that the latter cannot be bound by the subject noun phrase *Jan*. The (b)-examples provide similar cases involving coordinated sentences. For more discussion, we refer the reader to Postma (1984) and [www.onzetaal.nl/advies/diens.php](http://www.onzetaal.nl/advies/diens.php).

- (416) a. Jan<sub>i</sub> ontmoette Piet<sub>j</sub> en zijn<sub>i/j</sub> dochter.  
 Jan met Piet and his daughter  
 a'. Jan<sub>i</sub> ontmoette Piet<sub>j</sub> en diens<sub>j/\*i</sub> dochter.  
 Jan met Piet and his daughter  
 b. Jan<sub>i</sub> ontmoette Piet<sub>j</sub> gisteren en later ontmoette hij ook zijn<sub>i/j</sub> dochter.  
 Jan met Piet yesterday and later met he also his daughter  
 'Jan met Piet yesterday and later he also met his daughter.'  
 b'. Jan<sub>i</sub> ontmoette Piet<sub>j</sub> gisteren en later ontmoette hij ook diens<sub>j/\*i</sub> dochter.  
 Jan met Piet yesterday and later met he also his daughter  
 'Jan met Peter yesterday and later he also met his (= Peter's) daughter.'

Finally, we want to note that complex noun phrases and proper nouns marked with the genitive ending *-s* may alternate with the possessive pronouns; these complex noun phrases normally refer to [+HUMAN] entities. Of course these noun phrases do not function as determiners in the same sense as the possessive pronoun: they are phrases and not just words, and therefore cannot be placed in the D-position of the DP. See Section 5.2.2.5.1 for a more precise discussion of the restrictions on the use of these prenominal genitive phrases.

- (417) a. Complex noun phrase: *mijn broers boek* 'my brother's book'  
 b. Proper noun: *Jans boek* 'Jan's book'

#### 5.2.2.2. Interpretation

This section will examine some meaning aspects related to possessive pronouns. Section 5.2.2.2.1 will argue that the meaning of the referential possessive pronouns comes very close to that of the definite article, but that, in addition, it introduces a partitioning of the denotation set of the head noun (or NP, but we will stick to the simple cases here). This latter part of the meaning can also be found with the other semantic types of possessive pronouns. Section 5.2.2.2.2 will go into the semantic

relationship between the possessive pronoun and the referent of the noun phrase that brings about this partitioning: in the case of *zijn boek* ‘his book’, for example, this relationship can be one of ownership, authorship, and probably many others.

#### 5.2.2.2.1. Partitioning of the denotation set of the head noun

The previous section has shown that the possessive pronouns are in complementary distribution with the articles, and we have used this fact to motivate the claim that possessive pronouns function as determiners of the noun phrase. Another reason to adopt this claim is that possessive pronouns also have certain semantic properties in common with the articles. This is clearest with the referential possessive pronouns, which have more or less the same meaning contribution as the definite articles. Consider Figure 1, in which A represents the set of entities denoted by the subject NP and B represents the set of entities denoted by the verb phrase, where A and B are both contextually determined, that is, dependent on the domain of discourse (domain D). The intersection  $A \cap B$  denotes the set of entities for which the proposition expressed by the clause is claimed to be true.

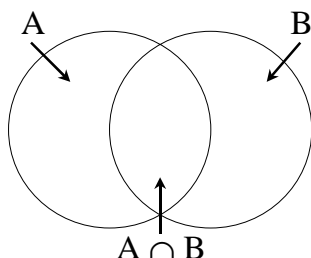


Figure 1: Set-theoretic representation of the subject-predicate relation

Section 5.1.1.1 has argued that the core meaning of the definite article is that all entities in domain D that satisfy the description of the subject NP are included in the intersection  $A \cap B$ , that is, that the remainder of set A is empty; cf. (418a'). The referential possessive pronoun *zijn* ‘his’ in (418b) expresses a similar meaning but in addition introduces a partitioning of set A: the contention is not about all entities that satisfy the description of the NP, but about a subset  $A_{\text{sub}}$  of it that stands in a certain relation to the referent of the possessive pronoun. The fact that the possessive pronouns imply a partitioning of set A does not, of course, necessarily imply that set A is a non-singleton set. When domain D contains just a single book, the speaker can still use the noun phrase *mijn boek* ‘my book’; in this case the evoked alternative referent set is empty.

- (418) a. De boeken verkopen goed.  
           the books sell well  
       a'. de  $N_{\text{pl}}$ :  $A - (A \cap B) = \emptyset$  &  $|A \cap B| \geq 1$   
       b. Zijn boeken verkopen goed.  
           his books sell well  
       b'.  $z_{\text{ijn}} N_{\text{pl}}$ :  $A_{\text{sub}} - (A_{\text{sub}} \cap B) = \emptyset$  &  $|A_{\text{sub}} \cap B| \geq 1$

Note that the relationship in question need not be one of possession but can be of various sorts and is largely determined by the non-linguistic context; see Janssen

(1976: Section 3.1) for relevant discussion. The referent of the possessive pronoun in (418b) may be the author or the publisher of the books but also someone who copy-edited them or made a guess about which books would sell well.

It is not only the core meaning of the definite articles that is associated with the referential possessive pronouns; other properties of definite noun phrases can also be found with noun phrases containing a referential possessive pronoun. For example, both types of noun phrase normally refer to entities in domain D that are assumed to be uniquely identifiable by the speaker; in a question like (419a), it is presupposed that the listener is able to identify the referent of the noun phrase *mijn sleutels*. And, just as in case of the definite article, noun phrases with a referential possessive pronoun may introduce new entities into domain D that are somehow anchored to some known entity in domain D. An example like (419b) does not presuppose that the listener knows who Jan's wife is, but that the mention of Jan is sufficient to anchor the referent of the noun phrase *zijn vrouw* 'his wife' to someone related to him.

- (419) a. Heb je mijn sleutels misschien gezien?  
           have you my keys        maybe        seen  
           'Did you by any chance see my keys?'  
       b. Ik zag Jan daarnet. Zijn vrouw ligt in het ziekenhuis.  
           I saw Jan just.now his wife        lies in the hospital  
           'I saw Jan just now. His wife is in the hospital.'

Noun phrases with a referential possessive pronoun, like definite noun phrases, also exhibit exceptions to the general requirement that the noun phrase be uniquely referring. For example, when the noun phrase refers to a body part, like a leg or a hand, the noun phrase may be singular, thus leaving some vagueness with respect to which of the (two) hands or legs is intended; cf. example (420a). Something similar occurs with kinship nouns; an example like (420b) does not presuppose that the speaker has only one nephew — apparently, it is not the referent that matters here but the relationship between the speaker and the person referred to. A similar case involving a non-kinship noun is given in (420c), which expresses that the train the speaker took that day was delayed.

- (420) a. Jan schopte tegen mijn been.  
           Jan kicked against my leg  
       b. Mijn neef is ziek.  
           my nephew is ill  
           'My nephew is ill.'  
       c. Mijn trein had weer eens vertraging.  
           my train had again once delay  
           'My train again had a delay.'

Due to the overlap in meaning between referential possessive pronouns and definite articles, the noun phrases introduced by a possessive pronoun in the primeless examples of (421) are virtually synonymous with the noun phrases in the primed examples, with a definite article and a postnominal possessive *van*-PP. This suggests that, apart from its reference, the meaning of the referential possessive



pronouns in the primeless examples consists of two parts that correspond to, respectively, the meaning of the definite article and the modifying *van*-phrase in the primed examples: the first part involves definiteness, and the second part involves the partitioning of the set denoted by the head noun into two subsets, namely a subset that is in the relevant semantic relation with the referent of the possessive pronoun and a subset that is not.

- |          |                     |                                 |
|----------|---------------------|---------------------------------|
| (421) a. | mijn/jouw/zijn boek | a'. het boek van mij/jou/hem    |
|          | my/your/his book    | the book of me/you/him          |
| b.       | ons/jullie/hun boek | b'. het boek van ons/jullie/hun |
|          | our/your/their book | the book of us/you/them         |

Since referential possessive pronouns are inherently definite, possessed indefinite noun phrases normally involve the presence of an indefinite article and a postnominal possessive *van*-PP, as in (422). As always, the indefinite article expresses that the intersection  $A \cap B = 1$ , without any implication for the remainder of set A, that is,  $A - (A \cap B)$  may or may not be empty.

- |          |                               |                                |
|----------|-------------------------------|--------------------------------|
| (422) a. | een boek van mij/jou/hem/haar | b. een boek van ons/jullie/hun |
|          | a book of me/you/him/her      | a book of us/you/them          |
|          | 'a book of mine/yours/his'    | 'a book of ours/yours/theirs'  |

For completeness' sake, observe that the complement of the preposition *van* is a personal object pronoun, and not, as in English, a(n inflected) possessive pronoun like in *a book of mine/yours/his/hers*.

Example (423a) shows that indefiniteness can also be inherited from the existentially quantified possessive pronoun *iemand's* 'someone's'. That the complete noun phrase is indefinite is clear from the fact that the noun phrase *iemand's auto* can occur in the °expletive *er*-construction. The possessive pronoun in this example again introduces a partitioning of set A, but the speaker leaves open which subset of A is intended. The universally possessive pronoun also introduces a partitioning of set A, but now it is claimed that all subsets of A are subsets of B. As a result (423b) expresses more less the same thing as the simpler sentence *De/Alle auto's staan verkeerd geparkeerd* 'The/All cars are wrongly parked', which perhaps accounts for the fact that (423b) feels somewhat marked.

- |          |                                             |
|----------|---------------------------------------------|
| (423) a. | Er staat iemand's auto verkeerd geparkeerd. |
|          | there stands someone's car wrongly parked   |
|          | 'Someone's car is wrongly parked.'          |
| b.       | Ieders auto staat verkeerd geparkeerd.      |
|          | everyone's car stands wrongly parked        |
|          | 'Everyone's car is wrongly parked.'         |

The reciprocal form *elkaars* 'each other's' and the interrogative and relative form *wiens* 'whose' also introduce a partitioning of set A. In (424a), the cardinality of the antecedent of the possessive pronoun is equal to the cardinality of the partitioning of set A, and the members of the antecedent and the relevant subsets of set A are reciprocally related to each other: set A consists of three essays, each by a different pupil, and each of the pupils admires the essays written by the other pupils.

In question (424b), it is assumed that the set of books is divided into subsets defined by, e.g., ownership, and the speaker asks, about a certain subset of books, to whom it belongs. In the relative construction in (424c), a certain partitioning is presupposed and used in order to enable the addressee to pick out the intended referent of the complete noun phrase.

- (424) a. Die drie leerlingen bewonderen elkaars opstel.  
           those three pupils admire each.other's essay  
       b. Wiens boeken zijn dit?  
           whose books are these  
       c. de man wiens boeken ik gelezen heb  
           the man whose books I read have

#### 5.2.2.2.2. *Semantic relations between the pronoun and the noun phrase*

The possessive pronouns owe their name to the fact that, in many cases, they refer to the possessor of the referent of the complete noun phrase; the noun phrase *mijn boek* 'my book' typically refers to a book that is in the possession of the speaker. However, the notion of possessive pronoun (or possessive noun phrase more generally) is a misnomer since the kind of relation between the referent of the pronoun and the referent of the complete noun phrase is not always restricted to possession; the noun phrase *mijn boek* may also involve, e.g., a relation of authorship. In the following subsections we briefly discuss two systematic kinds of relation the referent of the possessive pronouns and the referent set of the complete noun phrase may enter into. The discussion below does not aim at exhaustivity given that the creative powers of the language users far exceed our descriptive potential.

##### *1. Inferred relations*

In a sense, the relation expressed between the referent of the possessive pronoun/noun phrase (henceforth: possessor) and the referent of the full noun phrase in (425a) could be described as a relation of possession. However, the more general interpretation is that there is a kinship relation between the possessor and the referent of the full noun phrase. From the use of the noun *moeder* it can be inferred that there must be a daughter or a son, and (425a) expresses that the possessor is in this kinship relation to the referent of the full noun phrase; cf. Section 2.2.2. Examples like (425b), which expresses that the referent of the proper noun is part of the addressee's family, probably fall into the same category; this use of the possessive pronoun is particularly common when referring to members of the family, dear friends or favorite pets, even in those cases where the proper noun by itself would have sufficed for purposes of identification.

- (425) a. zijn/Jans moeder  
           his/Jan's mother  
       b. jullie Jan  
           your<sub>pl</sub> Jan

That noun phrases containing a possessor can be truly ambiguous between the possessive reading and a reading involving some implied relationship can be made clear by means of the examples in (426). Since a house typically invokes the idea of

an occupant, the inferred relation reading simply expresses that the referent of the possessive pronoun is living in the house in question, whereas on the possessive reading this person is actually the owner of the house. Example (426a) is only compatible with the inferred reading, whereas (426b) is compatible with the true possessive reading (and it may also be compatible with the inferred reading, in which case Jan is subletting the house).

- (426) a. Jan huurt zijn huis van een Amerikaan.  
 Jan rents his house from an American  
 b. Jan verhuurt zijn huis aan een Amerikaan.  
 Jan rents.out his house to an American

## II. Thematic relations

A special case of the inferred relation is the case in which the possessive pronoun/noun phrase can enter into a °thematic relationship with the head noun. This is especially clear with deverbal nouns like *behandeling* ‘treatment’, which is derived from and inherits the thematic structure of the transitive verb *behandelen* ‘to treat’; cf. Section 2.2.3. Consider the examples in (427). In (427b) it is shown that the agentive argument of the verb *behandelen* may appear as a prenominal possessor in the noun phrase. When there is no postnominal *van*-PP, as in (427c), the prenominal possessor may be interpreted as expressing the agent or the theme.

- (427) a. Zij/Marie<sub>Agent</sub> behandelt hem/Peter<sub>Theme</sub>.  
 she/Marie treats him/Peter  
 ‘She/Marie is treating him/Peter.’  
 b. haar/Maries<sub>Agent</sub> behandeling van hem/Peter<sub>Theme</sub>  
 her/Marie’s treatment of him/Peter  
 c. zijn/Peters<sub>Agent/Theme</sub> behandeling  
 his/Peter’s treatment

With non-derived nouns, the possessor may also be an argument of the noun. Example (425a) above, which involves a kinship noun, may actually be used to illustrate this: the noun *moeder* ‘mother’ selects an argument which is in a parent-child relation with the referent of the noun phrase. Other nouns that typically have this property are the so-called picture nouns like *foto* ‘photo’ in (428); cf. Section 2.2.5. The prenominal possessor in (428b) can be interpreted as the maker of the picture, that is, with a similar semantic role as the subject of the sentence in (428a). When the postnominal *van*-PP is absent, as in the (c)-examples, the prenominal possessor can be interpreted either as the maker or as the person depicted. Of course, all prenominal possessor in (428) can also be interpreted as the possessor of the picture in question.

- (428) a. Zij/Marie<sub>Agent</sub> maakt een foto van hem/Peter<sub>Theme</sub>.  
 she/Marie makes a photo of him/Peter  
 ‘She/Marie is making a picture of him/Peter.’  
 b. haar/Maries<sub>Agent</sub> foto van hem/Peter<sub>Theme</sub>  
 her/Marie’s photo of him/Peter

- c. haar/Maries<sub>Agent</sub> foto  
     her/Marie's photo  
 c'. zijn/Peters<sub>Theme</sub> foto  
     his/Peter's photo

For our present purposes the examples in (427) and (428) suffice. For a more extensive discussion of the thematic structure of nouns and the semantic roles that the pronominal possessors may have, see Chapter 2.

#### 5.2.2.3. Weak versus strong forms

As with the referential personal pronouns, it is normally the weak form of the referential possessive pronouns that is found in speech (but not in writing); the strong forms are generally confined to contrastive contexts. For example, in a neutral context like (429a), the weak form *m'n* (or *me*) is much preferred over the use of the strong form *mijn*. In a contrastive context like (429b), on the other hand, the strong form must be used, and the same thing holds when the possessive pronoun is coordinated with, e.g., another pronoun. Although the use of the weak form is generally preferred in speech, in what follows we will generally follow the orthographic convention of writing the strong form.

- (429) a. M'n/\*Mijn koffie is koud.  
           my coffee is cold  
       b. Jouw/\*Je thee is misschien lekker, maar mijn/\*m'n koffie is koud.  
           your tea is maybe tasty but my coffee is cold  
           'Your tea might be tasty, but my coffee is cold.'  
       c. [[Zijn en haar] ouders] zijn gescheiden.  
           his and her parents are divorced

Although all singular possessive pronouns (with the exception of the polite form *uw* 'your') have weak forms, the plural forms normally do not. However, the second person plural possessive pronoun *jullie* is exceptional in sometimes allowing the weak form *je*. The behavior of this weak form is, however, rather special. In order to show this, we have to digress a bit on the binding properties of the referential possessive pronouns. This will be done in the next section.

#### 5.2.2.4. Binding of referential possessive pronouns

This section will briefly discuss the °binding properties of the referential possessive pronouns. The binding behavior of these pronouns has received much less attention in the literature than that of the referential personal pronouns, which may be due to the fact that the distinction between referential and reflexive personal pronouns is not found with possessive pronouns: whereas the personal pronouns *hem* and *zichzelf* differ with respect to the domain in which they can be bound (cf. Section 5.2.1.5, sub III), *zijn* can be bound by all °c-commanding antecedents.

##### 1. The binding domain

As was illustrated in Section 5.2.2.1.4, the possessive pronouns differ from the personal pronouns in allowing an antecedent in the same clause. This is shown again by means of the examples in (430): whereas the third person feminine

possessive pronoun *haar* 'her' in (430a) can be interpreted as coreferential with the subject of its minimal clause, this is impossible for the referential personal pronoun *haar* in (430b); in that example the intended coreferential reading can only be expressed by means of the reflexive personal pronoun *zichzelf* 'herself'. In the examples below, coreference is indicated by means of italics.

- (430) a. *Marie* heeft *haar* auto verkocht.  
 Marie has her car sold  
 'Marie has sold her car.'  
 b. *Marie* heeft *zichzelf*/\**haar* op televisie gezien.  
 Marie has herself/her on television seen  
 'Marie saw herself on television.'

The referential possessive pronouns differ from the reflexive pronouns, however, in not requiring an antecedent in the same clause. This will become clear by comparing the two examples in (431).

- (431) a. *Marie* zegt dat Peter *haar* auto gekocht heeft.  
 Marie says that Peter her car bought has  
 'Marie says that Peter has sold her car.'  
 b. *Marie* denkt dat ik *haar*/\**zichzelf* op televisie gezien heb.  
 Marie thinks that I her/herself on television seen have  
 'Marie thinks that I saw her on television.'

In fact, the examples in (432) show that the referential possessive, like the personal pronoun, need not have an antecedent within the sentence at all, but can also be used anaphorically, in which case it refers to some active topic in the discourse, or deictically, in which case the referent of the pronoun is present in the situation in which the sentence is uttered.

- (432) a. Heb je *haar* boek meegenomen? [Anaphoric: discourse topic]  
 have you her book prt.-taken  
 'Did you bring her book?'  
 b. Het is allemaal *HAAR* schuld. [Deictic: speaker pointing at someone]  
 it is all her fault

The binding properties of the third person pronouns do not change when we substitute the weak form for the strong form: the pronoun can then still be bound within its minimal clause, as in (430a), or remain free in it, as in (431a) and (432a). This is different, however, with the strong and weak form of the plural second person possessive pronoun, *jullie* and *je*, which do have different binding properties. The weak form is special in that it can only be used when an antecedent can be found in its minimal clause, as in (433a); when the personal and possessive pronoun are adjacent, as in (433b), the use of the weak form is even strongly preferred, which may be due to the fact that this avoids the repetition of two homophonous words.

- (433) a. Peter zegt dat *jullie* volgende week *je/jullie* auto verkopen.  
 Peter says that you<sub>pl</sub> next week your<sub>pl</sub> car sell  
 'Peter says that you will sell your car next week.'
- b. Peter zegt dat *jullie je/?jullie* auto verkopen.  
 Peter says that you<sub>pl</sub> your<sub>pl</sub> car sell  
 'Peter says that you will sell your car.'

However, when the pronoun does not have an antecedent in its minimal clause, that is, when the antecedent is in a matrix clause or not expressed within the sentence, as in (434), the use of the weak plural pronoun *je* gives rise to severely degraded results. Since, to our knowledge, this has not yet been extensively discussed in the literature, we will not digress on this issue any further.

- (434) a. *Jullie* vertelden me gisteren dat Peter *jullie/?je* auto wil kopen.  
 you<sub>pl</sub> told me yesterday that Peter your<sub>pl</sub> car want buy  
 'You<sub>pl</sub> told me yesterday that Peter wants to buy your<sub>pl</sub> car.'
- b. Peter wil *jullie/?je* auto kopen.  
 Peter wants your<sub>pl</sub> car buy  
 'Peter wants to buy your<sub>pl</sub> car.'

## II. Generic and universally quantified antecedents

Just like third person personal pronouns, third person possessive pronouns have special properties with regard to their antecedent. We start with a discussion of *zijn* 'his', which can take the indefinite/generic pronoun *men* 'one' as its antecedent. This is followed by a discussion of third person possessive pronouns that take a quantified or generic antecedent. We will show that the behavior of these third person possessive pronouns is essentially identical to that of the reflexive personal pronoun *zichzelf* 'himself' when the antecedent is in the same clause, and to that of the personal pronoun *hem* 'him' in the remaining cases.

### A. The indefinite/generic pronoun *men*

Example (435a) shows that the singular third person possessive pronoun *zijn/z'n* 'his' can take the indefinite/generic personal pronoun *men* 'one' as its antecedent. This requires, however, that the antecedent of the possessive pronoun be in the same clause; when it is more deeply embedded, as in (435b), the possessive pronoun can only refer to a contextually determined referent. Note that the translation in (435b) is the intended interpretation, and not the actual one with *zijn* referring to some contextually determined person.

- (435) a. *Men* moet *zijn* ouders eren.  
 one must his parents honor  
 'One has to honor his parents.'
- b. \**Men* is hier zeer gastvrij, zodat je altijd in *zijn* huis kan slapen.  
 one is here very hospitable so that you always in his house can sleep  
 'People are very hospitable here, so that you can always sleep in *their* house.'

We can observe that the possessive pronouns behave similarly to the reflexive and personal pronouns in this respect. The reflexive pronoun *zich(zelf)* in (436a) must

have an antecedent in its own clause, and *men* is possible as an antecedent. The personal pronoun *hij* 'he' in (436b), on the other hand, cannot take an antecedent in its own clause, and *men* is not possible as an antecedent; (436b) is only acceptable when *hij* 'he' refers to a contextually determined referent. The translation in (436b) is the intended interpretation, and not the actual one with *hij* referring to some contextually determined person.

- (436) a. *Men* moet *zich(zelf)* goed verzorgen.  
           one must himself well look after  
           'One must look well after oneself.'
- b. \**Men* is hier zeer gastvrij, zodat *hij* je graag zal ontvangen.  
           one is here very hospitable so that he you gladly will receive  
           'People are very hospitable here, so that they will gladly receive you.'

#### B. Universally quantified antecedents

The examples in (437) show that when the antecedent of the personal pronoun is quantified, a third person referential possessive pronoun is used. In what follows we will focus on the cases with a universally quantified antecedent.

- (437) a. *Er* is *iemand* met *zijn* huiswerk bezig.  
           there is someone with his homework busy  
           'There is someone working on his homework.'
- b. *Iedereen/Iedere leerling* is met *zijn* huiswerk bezig.  
           everyone/every pupil is with his homework busy  
           'Everyone/Every pupil is working on his homework.'

When the antecedent is universally quantified, the number of the possessive pronoun depends on the syntactic relation between the pronoun and its antecedent. When the antecedent is the subject of the clause, and the possessive pronoun is part of a noun phrase in the same clause, as in (438a), the possessive pronoun is singular. The same thing holds when the noun phrase containing the possessive pronoun is more deeply embedded, as in (438b). However, when the antecedent and the possessive pronoun are not part of the same sentence, as in (438c), the plural pronoun must be used. The examples contain the universally quantified personal pronoun *iedereen*, but the same results arise when a universally quantified noun phrase like *iedere leerling* 'every pupil' is used.

- (438) a. *Iedereen* moet *zijn/\*hun* huiswerk maken.  
           everyone must his/their homework make  
           'Everyone has to do his homework.'
- b. *Iedereen* denkt dat *zijn/\*hun* leraar te veel huiswerk geeft.  
           everyone thinks that his/their teacher too much homework gives  
           'Everyone thinks that his teacher gives too much homework.'
- c. *Iedereen* had een huisdier mee naar school genomen.  
           everyone had a pet prt. to school taken  
           'Every pupil brought a pet to school.'
- Hun/\*Zijn* leraar vertelde iets over elk dier.  
           their/his teacher told something about each animal  
           'Their/His teacher told something about each animal.'

The examples in (438) show that singular agreement requires that the pronoun be bound, hence c-commanded, by the quantified antecedent. This conclusion is supported by the fact that the examples in (438a&b) receive the so-called BOUND VARIABLE READING, in which the possessive pronoun acts as a variable bound by the universal  $\circ$ operator expressed by the quantifier; example (438a), for example, has the interpretation that for each person  $x$  in domain  $D$ , it holds that  $x$  must do  $x$ 's homework. In (438c), on the other hand, the personal pronoun refers to the relevant entities as a group. In Section 5.2.2.2, sub III, we saw that similar observations could be made with the personal pronouns. We illustrate this here again by means of the examples in (439); since referential personal pronouns cannot have an antecedent in their own clause, we have used the reflexive pronoun *zichzelf* in (439a).

- (439) a. *Iedereen* moet *zichzelf* voorstellen.  
 everyone must himself introduce  
 'Everyone must introduce himself.'
- b. *Iedereen* denkt dat *hij* te veel huiswerk heeft.  
 everyone thinks that he too much homework has  
 'Everyone thinks that he has too much homework.'
- c. *Iedereen* had een huisdier mee naar school genomen.  
 everyone had a pet prt. to school taken  
 'Everyone brought a pet to school.'
- Zij* lieten/\**Hij* liet het allemaal aan de leraar zien.  
 they let/he let it all to the teacher see  
 'They all showed it to the teacher.'

### C. Generic antecedents

Since generically used noun phrases also express a kind of universal quantification (cf. Section 5.1.1.5), we might expect that the number features of personal pronouns referring to such noun phrases also depend on the syntactic context. This expectation is, however, not borne out. The number of the possessive pronoun is fully determined by the syntactic number of the generic noun phrase.

- (440) a. *Een leeuw* jaagt 's nachts op *zijn* prooi.  
 a lion hunts at night at his prey
- b. *Leeuwen* jagen 's nachts op *hun* prooi.  
 lions hunt at night at their prey
- c. *De leeuw* jaagt 's nachts op *zijn* prooi.  
 the lion hunts at night at its prey
- (441) a. *Een leeuw* is een vervaarlijk jager. *Zijn* prooi is machteloos tegen *zijn* klauwen.  
 a lion is a frightful hunter his prey is defenseless against his claws
- b. *Leeuwen* zijn vervaarlijke jagers. *Hun* prooi is machteloos tegen *hun* klauwen.  
 lions are frightful hunters their prey is defenseless against their claws
- c. *De leeuw* is een vervaarlijk jager. *Zijn* prooi is machteloos tegen *zijn* klauwen.  
 the lion is a frightful hunter his prey is defenseless against his claws

The examples in (442) show that the personal pronouns behave in a similar way.



- (442) a. *Een leeuw* is een vervaarlijk jager. *Hij* ligt in een hinderlaag en ...  
           a lion       is a frightful hunter     he lies in an ambush and  
       b. *Leeuwen* zijn vervaarlijke jagers. *Zij* liggen in een hinderlaag en ...  
           lions       are frightful hunters     they lie in an ambush and  
       c. *De leeuw* is een vervaarlijk jager. *Hij* ligt in een hinderlaag en ...  
           the lion     is a frightful hunter     he lies in an ambush and

### III. A note on the modifier *eigen* 'own'

In some cases, bound possessive pronouns can be modified by the element *eigen*. Consider the examples in (443): the addition of *eigen* to the bound pronoun *zijn* leads to a weird result in (443a&b), whereas the addition is fully acceptable in (443c). This seems to be related to the interpretation of these examples when *eigen* is absent: examples (443a&b) without *eigen* must be construed with the noun phrase acting as the possessor of the body parts mentioned in the PPs, whereas (443b) is ambiguous between this reading and a reading in which it is a body part of some other person. Unstressed *eigen* can be used to disambiguate the latter example.

- (443) a. Marie trok Jan een haar uit zijn (\*eigen) baard.  
           Marie pulled Jan a hair out.of his own beard  
       b. Jan klapte enthousiast in zijn (\*eigen) handen.  
           Jan clapped enthusiastically in her own hands  
       b. Jan deed zalf op zijn (eigen) neus.  
           Jan put ointment on his own nose

Nevertheless, it seems impossible to fully account for the insertion of *eigen* by appealing to the desire to avoid ambiguity; the examples in (444) are both unambiguous without *eigen*, but still a contrast similar to that found in (443) can be observed. Perhaps the difference is related to the fact that the PP in (444a) can be left implicit, whereas the one in (444b) cannot.

- (444) a. Ik klapte enthousiast in mijn (\*eigen) handen.  
           I clapped enthusiastically in my own hands  
       b. Ik deed zalf op mijn (eigen) neus.  
           I put ointment on my own nose

Occasionally, *eigen* can even be used to make a reading available that is not available without it. In example (445a), for example, the possessive pronoun is normally interpreted not as referring to the subject of the clause, but to some other person in domain D. The addition of unstressed *eigen* blocks this reading in favor of a reading in which the subject of the clause does act as the antecedent of the possessive pronoun.

- (445) a. Jan<sub>i</sub> is zijn<sub>j/\*i</sub> arts.  
           Jan is his physician  
       b. Jan<sub>i</sub> is zijn<sub>i/\*j</sub> eigen arts.  
           Jan is his own physician

### 5.2.2.5. *Special cases*

We conclude this section on possessive pronouns with the discussion of some special cases. Section 5.2.2.5.1 will start with the discussion of the use of the weak pronouns in semi-genitival constructions like *Jan z'n boek* 'Jan's book'. This is followed in 5.2.2.5.2 by a discussion of nominalized possessive pronouns in phrases like *de mijne* 'mine'. Section 5.2.2.5.3, finally, illustrates the use of possessive pronouns in more or less fixed expressions and idioms.

#### 5.2.2.5.1. *The semi-genitival construction: Jan z'n boek 'Jan's book'*

Section 5.2.1.1.1 has shown that the referential possessive pronouns have a strong and a weak form. Normally, these pronouns are used to refer to some discourse entity, but this section will show that the weak forms can also be used as a functional element (syntactic connective) when the possessor is expressed by means of a proper noun or a complex noun phrase.

The primeless examples in (446) show that when a prenominal possessor is a proper noun or a complex noun phrase, it may be inflected with an *-s* ending, which is historically related to but not identical to the medieval genitive marker; cf. Booij (2010: section 9.2). Although this is the norm in writing, it is not always the preferred option in speech. When the possessor is a proper noun or a singular noun phrase, the possessive relation is rather expressed by means of a weak possessive pronoun that agrees in gender and number with the possessive noun phrase, as in (446a'&b'). The judgments on the (c)-examples suggest that the genitive form is normal when the possessor is plural, which may be related to the fact that the possessive pronoun *hun* does not have a weak form; the use of % signals that speakers have different judgments on examples like (446c'), varying from marked to fully acceptable.

- |          |                   |     |                       |
|----------|-------------------|-----|-----------------------|
| (446) a. | Jans boek         | a'. | Jan z'n boek          |
|          | Jan's book        |     | Jan his book          |
| b.       | Maries boek       | b'. | Marie d'r boek        |
|          | Marie's book      |     | Marie her book        |
| c.       | mijn ouders' boek | c'. | %mijn ouders hun boek |
|          | my parents' book  |     | my parents their book |

Since the proper noun or complex noun phrase in the primed examples in (446) is a referring expression, the possessive pronouns have a function similar to the *-s* ending in the primeless examples, so that it can be said that they are not referential but purely functional: given their resemblance to the genitival constructions in the primeless examples, the primed examples will be referred to as the SEMI-GENITIVAL construction.

A complication concerning examples with plural possessors is that the acceptability of (446c) with the inflected plural noun phrase *mijn ouders* may be the exception rather than the rule. This is clear from the fact that, in speech, the homophonous examples *mijn zusters/broers boeken* in (447) can only have the singular interpretation of the primeless examples, not the plural interpretation of the primed example; in writing, the two readings can be distinguished by using an apostrophe following the possessor.

- |          |                    |                         |
|----------|--------------------|-------------------------|
| (447) a. | mijn zusters boek  | a'. mijn zusters' boek  |
|          | my sister's book   | my sisters' book        |
| b.       | mijn broers boeken | b'. mijn broers' boeken |
|          | my brother's books | my brothers' books      |

This means that the plural reading can only be expressed by means of the semi-genitival construction, or, for speakers who disfavor this construction, definite noun phrases with a postnominal *van*-PP, as in (448). Example (448a) shows that this construction can also be used as an alternate for (446c).

- |          |                                     |
|----------|-------------------------------------|
| (448) a. | het boek van mijn ouders            |
|          | the book of/by my parents           |
| b.       | het boek van mijn zuster/zusters    |
|          | the book of/by my sister/sisters    |
| c.       | de boeken van mijn broer/broers     |
|          | the books of/by my brother/brothers |

Note that the examples above involve plural possessors that form their plural in *-s*. When the possessor has a plural in *-en* or *-eren*, interpretative problems like those in (447) do not arise, and we therefore might expect the genitival construction to give rise to a fully acceptable result, regardless of the number of the possessor. This expectation is, however, not borne out: the unacceptability of the primed examples in (449) shows that genitive constructions are also unacceptable with plural possessors in this case (although we must immediately add that we did find a number of examples of the type *mijn kinderen N* on the internet). What is even more remarkable (at least in the light of the acceptability in writing of the primed examples in (447)) is that the primed examples in (449) are also unacceptable in writing, where we only find the form *het boek van mijn vrienden* and *de kamer van mijn kinderen*. These idiosyncratic restrictions on the use of the genitival construction (even in writing) suggest that the genitival construction is only a remnant of an older stage of the language; in the present-day language, the productive forms are the construction in (448) with a definite noun phrase and a postnominal *van*-PP and (at least for those speakers who allow it) the semi-genitival construction.

- |          |                   |                            |
|----------|-------------------|----------------------------|
| (449) a. | mijn vriends boek | a'. *mijn vriendsens boek  |
|          | my friend's book  | my friends' book           |
| b.       | ?mijn kinds kamer | b'. *mijn kinderen's kamer |
|          | my child's room   | my children's room         |

There are more restrictions on the genitival and, to a lesser extent, the semi-genitival constructions in (446). First, the possessor in these examples is typically a proper noun, as in (446a&b). When the noun phrase contains a kinship noun, as in (450a), both the genitival and the semi-genitival constructions are acceptable. When it refers to some other [+HUMAN] being, as in (450b), the genitival construction starts to decrease in acceptability, and the semi-genitival construction is then much preferred. The same thing holds when the noun phrase refers to a [-HUMAN] but [+ANIMATE] entity, as in (450c). A noun phrase referring to a [-ANIMATE] entity gives rise to a weird result in both constructions, as is shown in the (d)-examples; in

this respect, the (semi-)genitival construction does not differ from those in (404c'&d') involving possessive pronouns. Note that expressing the possessive relation by means of the postnominal *van*-PP is possible in all cases: cf. *het wiel van de brommer* 'the moped's wheel'.

- |          |                                        |     |                                             |
|----------|----------------------------------------|-----|---------------------------------------------|
| (450) a. | mijn vaders boek<br>my father's book   | a'. | mijn vader z'n boek<br>my father his book   |
| b.       | ??de bakkers auto<br>the baker's car   | b'. | de bakker z'n auto<br>the baker his car     |
| c.       | ??de honds voerbak<br>the dog's trough | c'. | de hond z'n voerbak<br>the dog his trough   |
| d.       | *de brommers wiel<br>the moped's wheel | d'. | *de brommer z'n wiel<br>the moped its wheel |

For completeness' sake, it can be noted that English constructions like *yesterday's newspaper* cannot be rendered by means of a possessive construction in Dutch but only by making use of a (non-possessive) postnominal *van*-PP or adverb: *de krant (van) gisteren*. This construction is more extensively discussed in Section 3.3.6.1.

Referential and reciprocal personal pronouns are never used in the semi-genitival construction: instead, we always find constructions with a referential or a reciprocal possessive pronoun.

- |          |                                                   |     |                                   |
|----------|---------------------------------------------------|-----|-----------------------------------|
| (451) a. | *hij/hem z'n boek<br>he/him his book              | a'. | zijn/z'n boek<br>his book         |
| b.       | *zij/haar d'r boek<br>she/her her book            | b'. | haar/d'r boek<br>her book         |
| c.       | *elkaar z'n/hun boek<br>each.other his/their book | c'. | elkaars boek<br>each.other's book |

This does not mean, however, that there is a general ban on using a personal pronoun as the possessor in semi-genitival constructions. The primeless examples in (452) show that demonstrative or interrogative pronouns can be used as such provided that their referent is [+HUMAN]. The primed examples show that these forms alternate with the genitival demonstrative pronoun *diens* or the interrogative pronouns *wiens*, which were discussed in Sections 5.2.2.1.2 and 5.2.2.1.5.

- |          |                                                                                                    |     |                                     |
|----------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------|
| (452) a. | die z'n/d'r <sup>96</sup> hun boeken<br>that his/her/their books<br>'that person's/persons' books' | a'. | diens boeken<br>that person's books |
| b.       | wie z'n/d'r <sup>96</sup> hun boeken<br>who his/her/their books<br>'whose books'                   | b'. | wiens boeken<br>whose books         |

Finally, the examples in (453) show that it is also possible for the quantificational personal pronouns to enter the semi-genitival construction. In all cases, it is the possessive pronoun *z'n* that is used. The universal semi-genitival construction in (453b) seems impossible with the more formal pronouns *ieder* and *elkeen*, which may be due to a clash in register. The most common genitival counterpart of the semi-genitival form *iedereen z'n* is *ieders*, although *iedereens* is also frequently

encountered. The semi-genitival forms in (453a&c) alternate with the genitive forms *iemand*s and *niemand*s.

- (453) a. Ik wil iemand z'n boek lenen.  
I want someone his book borrow  
'I want to borrow someone's book.'
- b. Ik heb iedereen z'n werk gelezen.  
I have everyone his work read  
'I have read everyone's work.'
- c. Ik heb niemand zijn toestemming nodig.  
I have no.one his permission need  
'I need no one's permission.'

5.2.2.5.2. *Nominalized possessive pronouns*

The observation in Section 5.2.2.1 that possessive pronouns cannot occur with determiners only holds for possessive pronouns that modify an overtly realized noun. When such a noun is lacking, the possessive pronoun is preceded by the definite article and followed by an *-e* suffix. As can be seen in Table 11, not all forms are equally acceptable.

Table 11: *Nominalized pronouns inflected with -e*

|                        |            | SINGULAR            | PLURAL                   |
|------------------------|------------|---------------------|--------------------------|
| 1 <sup>ST</sup> PERSON |            | <i>de/het mijne</i> | <i>de/het onze</i>       |
| 2 <sup>ND</sup> PERSON | COLLOQUIAL | <i>de/het jouwe</i> | * <i>de/het jullie-e</i> |
|                        | POLITE     | <i>de/het uwe</i>   | <i>de/het uwe</i>        |
| 3 <sup>RD</sup> PERSON | MASCULINE  | <i>de/het zijne</i> | ?? <i>de/het hunne</i>   |
|                        | FEMININE   | <i>de/het hare</i>  |                          |
|                        | NEUTER     | <i>de/het zijne</i> |                          |

Nominalized possessive pronouns are typically used in contrastive contexts like (454). The examples show that the article preceding the possessive pronoun is sensitive to the gender of the noun in the first conjunct: *auto* 'car' is non-neuter, and correspondingly the possessive pronoun is preceded by the non-neuter article *de* in (454a); *paard* 'horse' is neuter, and the article preceding the possessive pronoun in (454b) is the neuter article *het*.

- (454) a. Jouw auto is mooi, maar de mijne is nog mooier.  
your car is beautiful but the mine is even more beautiful  
'Your car is beautiful but mine is even more beautiful.'
- b. Zijn paard is erg snel, maar het mijne is liever.  
his horse is very fast but the mine is sweeter  
'His horse is very fast, but mine is sweeter.'

There are reasons, however, to assume that the possessive pronoun *mijne* in (454) is not part of an ellipsis construction, but the head of the noun phrase. The first is that, in contrast to the regular form *mijn*, the form *mijne* cannot be used when it is followed by an attributive adjective. This is shown in (455). Given the fact that an attributively used adjective must precede the noun it modifies, the ungrammaticality

of (455b) is to be expected when *mijne* is a noun, but not when it is followed by an empty noun (cf. *de blauwe* ‘the blue one’). The force of the argument is rather weak, however, given that the adjective cannot precede the nominalized possessive pronoun either.

- (455) a. Jouw rode trui is mooi, maar mijn blauwe is nog mooier.  
 your red sweater is beautiful but my blue is even more beautiful  
 'Your red sweater is beautiful, but my blue one is even more beautiful.'  
 b. \*Jouw rode trui is mooi, maar de mijne blauwe is nog mooier.  
 your red sweater is beautiful but the mine blue is even more beautiful

A second reason is that, at least in orthography, the possessive pronoun can be followed by the plural marker *-n* (the *n* in the plural suffix *-en* is normally not pronounced in Standard Dutch). The noun phrase headed by the possessive pronoun must then refer to the persons belonging to the referent of the possessive pronoun (in particular his family or followers).

- (456) a. ik en de mijnen                      b. Luther en de zijnen  
I and the mine                      Luther and the his  
'me and those who belong to me      'Luther and his followers'

For this reason, we will not consider the examples in (454) as counterevidence for the claim that possessive pronouns are determiners; they simply function as nouns. There is, however, another potential problem for this claim, which we have ignored so far, namely that the plural first person pronoun *ons* exhibits what seems to be attributive inflection. This is illustrated in (457).

- (457) a. onze slaapkamer  
our bedroom  
b. ons-Ø huis  
our house  
c. onze huizen  
our houses
- a'. een mooie slaapkamer  
a beautiful bedroom  
b'. een mooi-Ø huis  
a beautiful house  
c'. mooie huizen  
beautiful houses

A comparison of the primeless and primed examples suggests that the inflection of *ons* is similar to the inflection of an attributive adjective in an indefinite noun phrase (cf. 3.2.1), which in turn suggests that *ons* occupies the attributive position in the noun phrase (and not the determiner position). It must be noted, however, that the only thing we can conclude from the primeless examples in (457) is that the possessive pronoun agrees in gender and number with the head noun. In this respect, it is no different from the articles and the demonstrative pronouns, which agree with the head noun in the same way; what should surprise us is not that *ons* exhibits agreement with the head noun, but that the other forms do not. Note further that the fact that agreement on *ons* involves the suffix *-e* may be merely accidental, and need not point toward the conclusion that we are dealing with an attributive phrase. That it *is* just an accident is supported by the fact that the attributive ending *-e* is only absent in indefinite noun phrases, whereas noun phrases introduced by the referential possessive pronouns in Table 10 are always definite; cf. Section 5.2.2.2.

5.2.2.5.3. *Idioms and fixed combinations*

Possessive pronouns are featured in several more or less idiomatic constructions. Some of these will be discussed in the following subsections.

*I. Vocatives and salutations*

Possessive pronouns can occur in noun phrases that address a person or are used as the salutation in a letter. The possessive pronoun then implies that there is a certain intimacy between the speaker/writer and the addressee. The pronoun is generally followed by an adjective like *beste* or *lieve* ‘dear’. For obvious reasons, the possessive pronoun is the first person singular one in cases like these.

- (458) a. Mijn beste Jan/vriend, ...  
           my best Jan/friend  
           ‘Dear Jan/friend, ...’  
       b. Mijn lieve Jan/schat, ...  
           my sweet Jan/treasure  
           ‘My dear (Jan), ...’

*II. Evaluative use of possessive pronouns*

Sometimes the possessive pronoun has a purely evaluative function. An example like (459a) may express that Gerard Reve is the favorite writer of the addressee, a writer the addressee is talking a lot about, etc. Similarly, (459b) expresses that Jan has a special interest in astrology. Often, this construction is used ironically; an example like (459c) expresses that the speaker certainly does not share the belief (implicitly attributed to the addressee) that the girl in question is sweet.

- (459) a. jouw Gerard Reve  
           your Gerard Reve  
       b. Jan is altijd bezig met zijn astrologie.  
           Jan is always busy with his astrology  
       c. Jouw lieve dochter heeft weer eens een ruit gebroken.  
           your sweet daughter has again PRT a window broken  
           ‘Your sweet daughter has broken a window again.’

*III. “Par excellence” reading*

In the cases in (460), the use of the possessive pronouns seems to come close to the “par excellence” reading of the definite articles, discussed in Section 5.1.4.2, sub II.

- (460) a. je reinste onzin  
           your clearest nonsense  
           ‘utter nonsense’  
       b. Dat is je ware.  
           that is your true  
           ‘That’s the real thing.’  
       c. Dat is je dat.  
           that is your that  
           ‘That’s tops.’

#### IV. Collocations

Many more or less fixed combinations involve possessive pronouns within PPs. For the following, we have relied heavily on the discussion in Haeseryn et al. (1997: 293), to which we refer the reader for more examples.

##### A. PPs headed by *op*

The first set of constructions involves PPs headed by the preposition *op*. In the first subtype, exemplified in (461a), the possessive pronoun is followed by an NP inflected with *-s*. In the second subset, exemplified in (461b), the possessive pronoun is followed by a superlative adjective. In this construction, the pronoun *z'n* is invariant and does not seem to have referring force; we are therefore not dealing with a “true” possessive pronoun.

- (461) a. We doen het op zijn hondjes. [refers to a certain sexual position]  
 we do it on ZIJN dog<sub>dim-s</sub>  
 ‘We do it doggystyle.’  
 b. We zijn op zijn vroegst om vijf uur thuis.  
 we are at ZIJN earliest at 5 o’clock home  
 ‘At best, we will be home at 5 o’clock (but probably later).’

In some cases, however, examples like (461) do seem to contain a true possessive pronoun, which is clear from the fact that there is agreement between the pronoun and the subject of the clause. Some examples are given in (462).

- (462) a. Ik kleed me vandaag op m’n zondags.  
 I dress REFL today on my Sunday-*s*  
 ‘Today, I will dress like in my Sunday best.’  
 a’. Jij kleedt je vandaag op je zondags.  
 you dress REFL today on your Sunday-*s*  
 ‘Today, you will dress like on Sunday/at your best.’  
 b. ’s Avonds ben ik op m’n best.  
 at night am I at my best  
 ‘In the evening, I am at my best.’  
 b’. ’s Avonds ben jij op je best.  
 at night are you at your best  
 ‘In the evening, you are at your best.’

##### B. Met-PPs

Another more or less fixed combination consists of the proposition *met* followed by a possessive pronoun which in turn is followed by a cardinal numeral or quantifier inflected with *-en* (or, in Flemish, with *ge- ... -en*). This PP provides information about the size of a set of entities denoted by a plural argument elsewhere in the clause: in (463a) the subject pronoun *we* ‘we’, and in (463b), the direct object *de jongens* ‘the boys’. In examples like these, we may be dealing with the spurious, non-referring and invariant possessive pronoun *zijn*, or with a possessive pronoun that agrees with the modified argument.



- (463) a. We komen met z'n/ons vieren.  
 we come with ZIJN/our four-en  
 'There will be four of us.'
- b. Ik heb de jongens met zijn/<sup>?</sup>hun allen naar de bioscoop gebracht.  
 I zhave the boys with ZIJN/their all to the cinema brought  
 'I have brought the boys (all of them) to the cinema.'

The numeral in (463a) cannot be *\*enen* 'one-en'. When one wants to express that one comes alone, one would instead use the construction in (464) where the numeral *een* 'one' is adorned with the diminutive suffix *-tje*. Note that in this case the invariant, spurious possessive pronoun cannot be used.

- (464) a. Ik kom in mijn/\*zijn eentje.      b. Kom je in je/\*zijn eentje?  
 I come in my/ZIJN one-*tje*      come you in your/ZIJN one-*tje*  
 'I come alone.'      'Are you coming alone?'

#### 5.2.2.6. Differences between possessive pronouns and possessive *van*-PPs

We have seen in several places that possessive pronouns and prenominal possessive noun phrases may alternate with postnominal *van*-PPs; we illustrate this again in (465). This section concludes our discussion of possessive pronouns by pointing out some differences between the prenominal possessors and the postnominal PPs.

- (465) a. Jans/zijn boek      b. het boek van Jan/hem  
 Jans/his book      the book of Jan/him

A first difference involves the use of the possessors in questions like (466). As was already pointed out in the discussion of example (408) in Section 5.2.2.1, the use of the interrogative possessives *wiens/wier* 'whose' is rather formal. The colloquial manner of asking the intended question is by means of a possessive *van*-PP, as in (466a'). The questions in (466) evoke an elliptical answer, which only involves the possessor. The (b)-examples show, however, that using a possessive pronoun or genitive noun phrase gives rise to a degraded result; the more formal question in (466a) is also answered by means of the *van*-PP in (466b').

- (466) a. Wiens/Wier boek is dit?      a'. Van wie is dit boek?  
 whose<sub>masc/fem.</sub> book is this      of whom is this book
- b. <sup>\*?</sup>Jans/zijn.      b'. Van Jan/hem.  
 Jan's/his      Of Jan/him

Similar contrasts can also be found in other elliptical contexts like given in (467).

- (467) a. <sup>??</sup>Zij heeft zijn/Jans boek gelezen en hij haar/Maries.  
 she has his/Jan's book read en he her/Marie's  
 'She read her/Jan's book, and he her/Marie's.'
- b. Zij heeft het boek van hem/Jan gelezen en hij dat van haar/Marie.  
 she has the book of him/Jan read and he that of her/Marie

The second difference involves the form of the pronoun: example (468) shows that whereas the possessive pronoun can be either weak or strong, use of a weak pronoun as the complement of the preposition *van* gives rise to a marginal result. It

must be noted, however, that using a weak pronoun is possible when we replace the definite article by the distal demonstrative *dat*: *dat boek van me* ‘that book of mine’, provided that the noun phrase is interpreted as referring to an entity that is familiar to the hearer; Section 5.2.3.2.2, sub II, discusses this special construction in more detail.

- (468) a. mijn/m'n boek                      b. het boek van mij/?me  
my book                                  the book of me

A third difference concerns the use of the possessor in predicative postcopular position: the examples in (469) show that this is excluded with possessive pronouns and genitive noun phrases but possible with *van*-PPs.

- (469) a. <sup>?</sup>Het boek is mijn/Jans.                      b. Het boek is van mij/Jan.  
the book is my/Jan's                                      the book is of me/Jan

The examples in (470) illustrate a final difference: whereas coordination of possessive pronouns and/or genitive noun phrases gives rise to a marked result, coordination of pronouns and noun phrases within the *van*-PP is readily possible.

- (470) a. <sup>??</sup>jouw en haar boek  
          your and her book  
      b. het boek van jou en haar  
          the book of you and her
- a'. \*Peters en jouw boek  
      Peter's and your book  
b'. het boek van Peter en jou  
      the book of Peter and you

It may be interesting to note that the differences between the possessive pronouns and the postnominal *van*-PP containing a personal pronoun neatly correspond to those between the so-called strong and weak possessive pronouns discussed by Cardinaletti (1998); see Alexiadou et al. (2007: 569-70) for a brief discussion of the relevant Italian data.

### 5.2.3. Demonstrative pronouns

Like articles and possessive pronouns, demonstrative pronouns can be held responsible for the referential properties of the DPs they are heading: we will see that demonstrative pronouns can be definite or indefinite, for which we will use the notions of D-linked and non-D-linked, for reasons that will become clear later. Furthermore, like the possessive pronouns, the demonstratives differ from the articles in that they normally form a partition of the entities in the domain of discourse (domain D). For example, in contrast to the DP *de boeken*, a DP like *deze boeken* ‘these books’ need not refer to the complete set of books in domain D; the set of books is, rather, divided into two (or more) subsets, and the DP refers to the entities contained in one of the resulting subsets.

This section is divided into two parts: Section 5.2.3.1 will discuss the core functions of the demonstrative pronouns and provide a classification of the various types, and Section 5.2.3.2 will pay attention to various more special uses of the demonstratives.

5.2.3.1. *Classification*

Traditional grammar distinguishes between several types of demonstratives. A first distinction that is normally made is that between demonstratives functioning as modifiers and demonstratives functioning as independent arguments. In the former case, the demonstrative functions as a determiner in a noun phrase. In the latter case, the demonstrative is used independently as an argument, that is, in a way comparable to that of a personal pronoun. The most common demonstratives like *dit* 'this' and *dat* 'that' in (471) can have both functions, but some forms can only be used as arguments.

- (471) a. *Dit boek is spannend, maar dat boek is saai.* [demonstrative modifier]  
           this book is exciting but that book is dull  
       b. *Dit is spannend, maar dat is saai.* [demonstrative argument]  
           this is exciting but that is dull

Section 5.2.3.1.1 will discuss the demonstrative modifiers, followed in Section 5.2.3.1.2 by a discussion of the demonstrative arguments. Section 5.2.3.1.3 will conclude with some brief remarks on the use of demonstratives as predicates.

5.2.3.1.1. *Demonstratives as modifiers*

The main reason to assume that demonstratives function as determiners is that they are in complementary distribution with the articles; cf. (472). This follows immediately if the two compete for the same position in the structure: the head position of the DP. As in the case of the possessive pronouns, we must add that the claim that demonstratives are determiners is not cross-linguistically valid given that in some languages demonstrative pronouns do co-occur with articles; see Alexiadou et al. (2007: 106) for some examples.

- |                               |                           |                              |
|-------------------------------|---------------------------|------------------------------|
| (472) a. * <i>de deze man</i> | b. * <i>het dat kind</i>  | c. * <i>de die kinderen</i>  |
| the this man                  | the that child            | the those children           |
| a'. * <i>deze de man</i>      | b'. * <i>dat het kind</i> | c'. * <i>die de kinderen</i> |
| this the man                  | that the child            | those the children           |

We can distinguish four main classes of demonstrative modifiers. A first distinction that can be made is that between non-interrogative and interrogative demonstratives. Following the tradition in Dutch linguistics, we will divide the two classes further into definite and indefinite demonstratives, although we will replace the notion of (in)definiteness by the notion of D-linking. Finally, we will see that the form of the demonstratives depends on the nominal features of the modified head noun.

1. *Non-interrogative demonstratives*

The class of °D-linked (definite) non-interrogative demonstratives consists of the pronouns *deze* 'this/these', *die* 'that/those', *dit* 'this', and *dat* 'that'; noun phrases headed by these determiners are definite in the sense that they can be used to refer to certain entities in the domain of discourse. The Dutch tradition furthermore assumes that the demonstratives *zo'n* 'such a' and *zulk(e)* 'such' head indefinite DPs. Table 12 provides the full paradigm of non-interrogative demonstrative pronouns.

Table 12: Non-interrogative demonstrative pronouns

|              |           |           | COUNT NOUNS                       |                                    | NON-COUNT<br>NOUNS             |
|--------------|-----------|-----------|-----------------------------------|------------------------------------|--------------------------------|
|              |           |           | SINGULAR                          | PLURAL                             |                                |
| D-LINKED     | [-NEUTER] | PROXIMATE | <i>deze vrouw</i><br>this woman   | <i>deze vrouwen</i><br>these women | <i>deze wijn</i><br>this wine  |
|              |           | DISTAL    | <i>die vrouw</i><br>that woman    | <i>die vrouwen</i><br>those women  | <i>die wijn</i><br>that wine   |
|              | [+NEUTER] | PROXIMATE | <i>dit meisje</i><br>this girl    | <i>deze meisjes</i><br>these girls | <i>dit bier</i><br>this beer   |
|              |           | DISTAL    | <i>dat meisje</i><br>that girl    | <i>die meisjes</i><br>those girls  | <i>dat bier</i><br>that beer   |
| NON-D-LINKED | [-NEUTER] |           | <i>zo'n vrouw</i><br>such a woman | <i>zulke vrouwen</i><br>such women | <i>zulke wijn</i><br>such wine |
|              | [+NEUTER] |           | <i>zo'n meisje</i><br>such a girl | <i>zulke meisjes</i><br>such girls | <i>zulk bier</i><br>such beer  |

Table 12 shows that the form of the D-linked demonstrative modifiers also depends on the nominal features of the head noun. The pair *deze/die* has the same distribution as the definite article *de* 'the'; these demonstratives are used in singular non-neuter and plural noun phrases. The pair *dit/dat* has the same distribution as the definite article *het*; these demonstratives are only used in singular neuter noun phrases. Both pairs can also be used with non-count nouns; since non-count nouns do not have a plural form, the choice in these cases depends on the gender of the noun only. The choice between the non-D-linked demonstratives *zo'n* and *zulke* depends on number: *zo'n* is only used with singular nouns (although, according to De Rooij 1989, some Dutch dialects also allow it with plural nouns), whereas *zulke* requires a plural noun. Non-count nouns always take *zulk(e)*, where the presence of the inflection ending *-e* depends on the gender of the head noun: *zulk* is used with neuter non-count nouns and *zulke* with the non-neuter ones. For completeness' sake, note that besides *zulke wijn/zulk bier*, it is also possible to have *zo'n wijn/bier*. Given the fact that it is also possible to have *zulke wijnen/bieren*, it seems plausible that the nouns in *zo'n wijn/bier* are actually functioning as count nouns (cf. Section 1.2.2.1.3, example (54)), although it must be admitted that the difference in meaning between the two singular cases is not easy to pinpoint.

The remainder of this section is divided into two parts in which we discuss, respectively, the non-D-linked and D-linked demonstratives. We start with the latter since this will enable us to introduce the notion of D-linking.

#### A. Non-D-linked demonstratives

As was already mentioned above Table 12, the Dutch tradition refers to *zo'n* 'such a' and *zulk(e)* 'such' as indefinite demonstratives, thus suggesting a similarity in meaning with the indefinite articles *een* 'a' and  $\emptyset$ . It must be noted, however, that DPs headed by these demonstratives do not refer in the same sense as a DP headed by an indefinite article: whereas an indefinite noun phrase like *een vrouw* introduces a new entity into domain D or refers to some entity unknown to the addressee, a noun phrase like *zo'n vrouw* rather invokes some notion of comparison, which is

clear from the fact that it can be paraphrased as “a woman like that”. Another way to express this would be to say that a noun phrase like *een vrouw* refers to a TOKEN, whereas *zo’n vrouw* refers to a TYPE. Since DPs headed by the demonstratives *zo’n* and *zulke* are not referring expressions in the same sense as DPs headed by an indefinite article, using the notion of indefiniteness may be confusing. For this reason, we will introduce two new notions here: DPs headed by demonstratives like *deze/die* and *dit/dat* will be said to be D-LINKED (linked to the discourse), whereas DPs headed by demonstratives like *zo’n* and *zulke* will be said to be NON-D-LINKED (not linked to the discourse).

Although the non-D-linked demonstrative modifiers *zo’n* ‘such a’ and *zulk(e)* ‘such’ are considered determiners in traditional grammar, it must be noted that *zo’n* is a contracted form of *zo een*. Therefore, it could also be claimed that we are dealing here with the indefinite article *een* ‘a’, which is premodified by the adverb *zo* ‘so’.

#### A. D-linked demonstratives

The demonstrative pronouns are typically used deictically, that is, they refer to a referent that is physically present in the situation in which the utterance is made. The proximate and distal demonstratives indicate different relative distances between the referent of the noun phrase and the speaker; the proximate ones indicate that the referent is close to the speaker, whereas the distal ones indicate that the referent is more remote from the speaker. The notion of distance can be interpreted literally and metaphorically; cf. Alexiadou (2007: 100/1) and references cited there. In examples like (473), involving literal distance, the relevance of relative distance can be stressed by modifying the noun phrase by means of the locational pro-forms *hier* and *daar*. The former is more readily used with the proximate demonstratives, whereas the latter is preferably used with the distal ones.

- (473) a. Dit boek over WO II hier/\*<sup>?</sup>daar is erg indrukwekkend.  
           this book about WW II here/there is very impressive  
       b. Dat boek over WO II daar/\*<sup>?</sup>hier is erg indrukwekkend.  
           that book about WW II there/here is very impressive

Note that the pro-forms normally are at the right edge of the noun phrase, and given that they are related to the reference of the noun phrase, it seems plausible that they are directly modifying the demonstrative. In this context it might be interesting to note that Afrikaans has the demonstratives *hierdie* ‘this’ and *daardie* ‘that’, which are apparently formed by combining the Standard Dutch demonstrative *die* and the locational pro-forms; see Alexiadou (2007: 117) for similar observations in Swedish, and examples like *This here dog is a good hunter* and *That there cat has been with me fifteen years* in certain Southern U.S. dialects (Carole Boster, p.c.).

The notion of distance can also be interpreted temporally. For example, the noun phrase *deze week* ‘this week’ in (474a) will normally include the speech time, which is clear from the fact that the past tense gives rise to an infelicitous result, whereas the noun phrase *die week* will normally be contextually determined. So in a report on the flood in Zeeland in 1954 the noun phrase *die week* will refer to the

week the flood occurred, which can be stressed by the more specialized form *diezelfde* ‘the very same’.

- (474) a. De koningin gaat/\*ging deze week nog naar Zeeland.  
           the Queen goes/went this week PRT to Zeeland  
       b. De koningin ging/#gaat die(zelfde) week nog naar Zeeland.  
           the Queen goes/went the.very.same week PRT to Zeeland

Furthermore, the notion of distance may be taken more metaphorically as “relatedness” to the speaker. There seems to be a tendency for the speaker to use the distal demonstrative to refer to an object belonging to the addressee and the proximate demonstrative when he is the owner himself. So, with two people at a table with a book on it, the speaker will prefer the use of the distal demonstrative when he is asking permission to browse someone else’s book, and the proximate demonstrative when he is granting that person permission to browse his book.

- (475) a. Mag ik dat boek even in kijken?  
           may I that book for.a.moment into look  
           ‘Can I browse that book?’  
       b. Wil je dit boek even bekijken?  
           want you this book for.a.moment look.at  
           ‘Do you want to browse this book?’

However, other considerations can readily overrule this tendency. For example, when the speaker is already holding the book, it is more likely that he will use the proximate pronoun to ask permission, and when the addressee is already holding the book, he will probably use the distal one to grant permission to browse the book.

On its deictic use, the demonstratives are typically used to partition the denotation set of the modified head noun. This is particularly clear in contrastive contexts like (476), where the speaker explicitly refers to two subsets of books, but the same thing holds for non-contrastive contexts (although in those cases the evoked alternative referent set may be empty, as in the context sketched for the examples in (475)).

- (476) a. Je moet niet DIT maar DAT boek lezen.  
           you must not this but that book read  
       b. Je moet niet DEZE maar DIE boeken lezen.  
           you must not these but those books read

## II. Interrogative demonstratives

Seen semantically, the pronoun *welk(e)* can be considered the interrogative counterpart of the D-linked demonstrative pronouns in Table 12. The non-D-linked demonstratives *zo’n* ‘such a’ and *zulk(e)* ‘such’ also seem to have an interrogative counterpart: *wat voor (een)* ‘what kind of’.

Table 13: Interrogative demonstrative pronouns

|              |           | COUNT NOUNS                                 |                                               | NON-COUNT NOUNS                           |
|--------------|-----------|---------------------------------------------|-----------------------------------------------|-------------------------------------------|
|              |           | SINGULAR                                    | PLURAL                                        |                                           |
| D-LINKED     | [-NEUTER] | <i>welke vrouw</i><br>which woman           | <i>welke vrouwen</i><br>which women           | <i>welke wijn</i><br>which wine           |
|              | [+NEUTER] | <i>welk meisje</i><br>which girl            | <i>welke meisjes</i><br>which girls           | <i>welk bier</i><br>which beer            |
| NON-D-LINKED | [-NEUTER] | <i>wat voor vrouw</i><br>what kind of woman | <i>wat voor vrouwen</i><br>what kind of women | <i>wat voor wijn</i><br>what kind of wine |
|              | [+NEUTER] | <i>wat voor meisje</i><br>what kind of girl | <i>wat voor meisjes</i><br>what kind of girls | <i>wat voor bier</i><br>what kind of beer |

The table shows that the form of the D-linked interrogative demonstrative *welke* depends on the gender and number of the head noun in the same way as the attributive adjectives. With count nouns, *welk* ‘which’ is used with singular neuter nouns, whereas *welke* ‘which’ is used in the remaining cases. With non-count nouns, the form depends on the gender of the noun: *welk* is used with neuter, and *welke* is used with non-neuter nouns. The interrogative counterpart of the non-D-linked demonstratives is the same for all genders and numbers: *wat voor (een)* ‘what kind of’. The semantic difference between the two interrogative forms is again related to D-Linking: the D-linked demonstrative solicits an answer like “this or that N”, which fully identifies the relevant token(s), whereas the non-D-linked one rather solicits an answer like “an N like this or that”, which provides a description of the relevant type(s).

The conclusion that *welke* and *wat voor (een)* are the interrogative counterparts of the demonstratives in Table 12 can be used to justify our earlier decision to characterize noun phrases headed by demonstratives by means of the notion of D-linking rather than by means of the notion of definiteness. The fact that (nonspecific) definite noun phrases normally cannot be used as the subject in an °expletive construction shows that it would be improper to call the interrogative demonstrative *welke* ‘which’ definite: the optional presence of *er* in (477) shows that noun phrases headed by this demonstrative can be indefinite.

- (477) a. *Welke vrouw heeft (er) tegen die wet geprotesteerd?*  
which woman has there against that bill protested  
‘Which woman protested against that bill?’  
b. *Welke kinderen zijn (er) nog niet ingeënt?*  
which children are there not yet vaccinated  
‘Which children have not been vaccinated yet?’

The preceding discussion of the interrogative forms in Table 13 suffices for our present purposes. It must be noted, however, that the *wat voor* phrases have received (relatively) much attention in the literature. For a more extensive discussion of the construction, see Section 4.2.2.

### 5.2.3.1.2. Demonstratives as arguments

This section discusses demonstrative pronouns that can be used as arguments. We will start by showing that the demonstrative modifiers discussed in 5.2.3.1.1 can also be used without being followed by a noun. After that, we will discuss some demonstrative pronouns that cannot be used as modifiers.

#### 1. Demonstrative pronouns that can be used as modifiers and as arguments

This subsection discusses demonstratives that can be used both as modifiers and as arguments. We start with a discussion of the non-interrogative pronouns, which is followed by a discussion of the interrogative ones.

##### A. Non-interrogative demonstrative pronouns

The demonstrative pronouns discussed in the previous section can also be used as arguments, in which case the referent of the demonstrative is fully determined by the context. The form of the D-linked demonstratives is determined by the same factors as the modifiers in the previous section: *dit* ‘this’ and *dat* ‘that’ are singular and only refer to entities that would normally be referred to by means of a neuter noun phrase; *deze* ‘this/these’ and *die* ‘that/those’ are either singular, in which case they refer to entities that would normally be referred to by means of a non-neuter noun phrase, or plural. This is illustrated in Table 14, where the demonstratives function as the subject of the clause, so that their number can be determined by inspecting the number of the verb.

Table 14: D-linked demonstratives used as arguments

|            |           | SINGULAR                                     | PLURAL                                        |
|------------|-----------|----------------------------------------------|-----------------------------------------------|
| NON-NEUTER | PROXIMATE | <i>Deze is leuk.</i><br>this one is nice     | <i>Deze zijn leuk.</i><br>these are nice      |
|            | DISTAL    | <i>Die is leuk.</i><br>that one is nice      | <i>Die zijn leuk.</i><br>those are nice       |
| NEUTER     | PROXIMATE | <i>Dit is mooi.</i><br>this one is beautiful | <i>Deze zijn mooi.</i><br>these are beautiful |
|            | DISTAL    | <i>Dat is mooi.</i><br>that one is beautiful | <i>Die zijn mooi.</i><br>those are beautiful  |

In question-answer pairs, the neuter D-linked demonstratives *dit* and *dat* may (optionally) have an *-e* ending in spoken language. These forms cannot be used as modifiers, and are only used deictically, that is, while showing or pointing at the entity in question. A similar “inflected” form is possible with the first person singular personal pronoun *ik*; *Wie is daar? Ik(ke)* ‘Who’s there? Me’.

- (478) a. Wat heb je gekocht? [question]  
          what have you bought
- b. Dit(te)/Dat(te). [answer]  
          this/that

The fact that the demonstratives in Table 14 are rendered in English by appealing to the pro-form *one* in the singular suggests that the Dutch examples



contain an empty noun with the same function as English *one*. Support in favor of this suggestion is provided by the fact illustrated in (479a&b) that an attributive adjective may follow the demonstrative; see Section A5.4 for a more extensive discussion of this kind of reduced noun phrases. It must be noted, however, that the neuter singular demonstratives in (479c) do not have this option: the neuter noun in, for instance, *dit/dat grote boek* ‘this/that big book’ cannot be omitted.

- (479) a. *Deze/Die grote is leuk.* [singular non-neuter]  
           this/that big.one is nice  
       b. *Die grote zijn leuk.* [plural]  
           those big.ones are nice  
       c. *\*Dit/Dat grote is leuk.* [singular neuter]  
           this/that big.one is nice

When used deictically, the forms in Table 14 are mainly used to refer to [-HUMAN] entities. Using these demonstratives to refer to a person generally leads to a pejorative connotation: a speaker uttering examples like (480) leaves no doubt that he does not have a high opinion of the person he is referring to. The neutral (non-pejorative) counterparts of the examples in (480) will involve a referential personal pronoun.

- (480) a. *Die is helemaal gek geworden.* [pejorative]  
           that.one is totally nuts become  
           ‘That one has become totally nuts.’  
       b. *Die komt mijn huis niet meer in!* [pejorative]  
           that.one comes my house not anymore into  
           ‘I won’t let that one enter my house anymore.’

This pejorative meaning aspect is absent when these demonstratives are used anaphorically to refer to a person, that is, when the referent has been mentioned in the discourse immediately before the demonstrative is used, as in (481). We will return to this use of the demonstrative in Section 5.2.3.2.2, sub I.

- (481) a. *Heb je Jan/Marie gezien? Nee, die is ziek.*  
           have you Jan/Marie seen no (s)he is ill  
           ‘Did you see Jan? No, he is ill.’  
       b. *Jan/Marie, die schijnt al weken ziek te zijn.*  
           Jan/Marie (s)he seems already weeks ill to be  
           ‘Marie, she seems to have been ill for weeks.’

Non-D-linked demonstratives can also be used as arguments. It must, however, be noted that the form *zo’n* must then be realized as *zo één*. As before, the two forms differ in number: *zo één* is singular whereas *zulke* is plural, as is clear from the number agreement with the finite verb in (482).

- (482) a. *Zo één is hier nog nooit eerder geweest.*  
           such one is here PRT never before been  
           ‘One like that has never been here before.’  
       b. *Zulke zijn het mooiste.*  
           such ones are the most beautiful

### B. Interrogative demonstrative pronouns

The examples in (483) show that the D-linked interrogative demonstrative pronouns can also be used as arguments, although the use of the neuter singular pronoun is marked. The pattern in (483) is therefore similar to that in (479), which involves non-interrogative pronouns.

- (483) a. Welke is het lekkerste? [singular non-neuter]  
           which one is the tastiest  
       b. Welke zijn het lekkerste? [plural]  
           which ones are the tastiest  
       c. <sup>??</sup>Welk is het lekkerste? [singular neuter]  
           which one is the tastiest

It is not entirely clear whether non-D-linked interrogative demonstrative *wat voor een* can be used in this way. Example (484) is acceptable, but obligatorily contains an occurrence of what seems to be °quantitative *er*, which suggests that we are instead dealing with a construction comparable to *Jan heeft er drie* ‘Jan has three of them’, where quantitative *er* replaces the nominal head of the object noun phrase.

- (484) a. Wat voor een [*e*] heeft hij <sup>\*(?)</sup>(*er*)?  
           what for a has he ER  
       b. Wat heeft hij <sup>\*(?)</sup>(*er*) voor een [*e*]?  
           what has he ER for a  
           ‘What kind does he have?’

### II. Demonstrative pronouns that can only be used as arguments

The demonstrative pronouns *degene*, *diegene* and *datgene* can only be used as arguments, that is, can never be used as modifiers. These forms are always followed by a restrictive relative clause. The first two forms refer to [+HUMAN] entities. In orthography, they are inflected with the plural affix *-n* when they refer to more than one person, as is shown in (485a’); this ending is, however, normally not pronounced. The form *datgene* can only be singular and refers to a [-HUMAN] entity.

- (485) a. <sup>(?)</sup>Degene/Diegene die het eerst klaar is, is de winnaar.  
           the one who the first finished is is the winner  
           ‘The one that is finished first is the winner.’  
       a’. <sup>(?)</sup>Degenen/Diegenen die klaar zijn, mogen vertrekken.  
           those who finished are may leave  
           ‘Those who are finished may leave.’  
       b. <sup>(?)</sup>Datgene wat je me nu vertelt, wist ik niet.  
           that what you me now tell knew I not  
           ‘I didn’t know what you are telling me now.’

Seen diachronically, the forms in (485) are probably compounds. In archaic language the form *gene* ‘yonder’ can be used as a distal demonstrative, as in *aan gene zijde van de rivier* ‘on yonder side of the river’ or *aan gene zijde van het graf* ‘in the hereafter’ (lit.: on yonder side of the grave). In present-day language it is

also used in the fixed combinations *deze of gene* ‘some/someone’ and *deze(n) en gene(n)* ‘some’ (which are respectively singular and plural).

The constructions in (485) are semantically more or less equivalent to the free relative constructions in (486). The former are perhaps somewhat marked and mainly found in written language, hence the question marks within parentheses in (485).

- (486) a. Wie het eerst klaar is, is de winnaar.  
           who the first finished is is the winner  
           ‘The one that is finished first, is the winner.’  
       a’. Wie klaar zijn, mogen vertrekken.  
           who finished are may leave  
           ‘Those who are finished may leave.’  
       b. Wat je me nu vertelt, wist ik niet.  
           what you me now tell knew I not  
           ‘I didn’t know what you are telling me now.’

### 5.2.3.1.3. *The demonstrative dat as a predicate*

The examples in (487) show that the demonstrative *dat* can also be used to refer to an adjectival or nominal predicate. The (b)-examples show that the form does not agree in gender or number with the nominal predicate. As is shown in (487c), *dat* can also be used to refer to a verb phrase. Given the fact that the form of the demonstrative is invariant we may conclude that the form *dat* is the default form of the demonstrative, which shows up when the referent is not marked for the features gender and number. We will return to this use of the demonstrative *dat* in Section 5.2.3.2.2, sub I.

- (487) a. Aardig, dat is Jan niet.  
           nice that is Jan not  
       b. Een aardige jongen, dat is Piet niet.  
           a nice boy that is Piet not  
       b’. Aardige jongens, dat zijn Jan en Piet niet.  
           nice boys that are Jan and Piet not  
       c. Jan wil het boek lezen en Marie wil dat ook.  
           Jan wants the book read and Marie wants that too

### 5.2.3.2. *Special cases*

This section is concerned with some special uses of the demonstratives. We will start in 5.2.3.2.1 with a number of idiomatic cases where the demonstrative is used in its case-inflected form. After that, Sections 5.2.3.2.2 to 5.2.3.2.4 will discuss a number of constructions that are often characterized by the fact that only one specific type of demonstrative pronoun can be used: we subsequently discuss constructions featuring the D-linked distal, the D-linked proximate, and non-D-linked demonstrative pronouns. We conclude in Section 5.2.3.2.5 with a discussion of the emphatic element *zelf* ‘himself’, which is often also considered a kind of demonstrative pronoun.

### 5.2.3.2.1. Idiomatic case-inflected forms

Dutch demonstratives do not inflect for case (in contrast to German), but there are a large number of historical relics in which inflected demonstratives do occur, and which are used in formal, written language. The examples in (488) must all be considered idiomatic, although we have seen in Section 5.2.2.1.5, that the masculine genitive form *diens* is still productively used in formal language.

- (488) a. bij *dezen* 'by means of this letter'  
 b. één *dezer* dagen 'one of these days'  
 c. in *dier* voege 'so that ...'  
 d. met *dien* verstande dat ... 'provided (that) ...'  
 e. met alle gevolgen van *dien* 'with all its consequences'  
 f. te *dien* einde dat ... 'in order that ...'  
 g. uit *dien* hoofde 'because of that'  
 h. wat *dies* meer zij 'more of similar things'

### 5.2.3.2.2. Distal demonstrative pronouns

This section is concerned with the special uses of the distal pronouns. That these cases are special is clear from the fact that the distal demonstrative cannot be replaced by a proximate one without changing the meaning of the construction.

#### I. Distal demonstratives referring to [+HUMAN] entities

In order to refer to some [+HUMAN] entity in the domain of discourse, normally a personal pronoun is used; using a demonstrative pronoun in this function generally leads to a pejorative connotation; cf. 5.2.3.1.2, example (480). This subsection discusses some exceptions to this general rule.

#### A. Distal pronouns with an antecedent in the immediately preceding discourse

One common exception is when the antecedent of the distal demonstrative is mentioned in the immediately preceding discourse, as in the examples in (481a), repeated here as (489). We have added indices to this example in order to unambiguously indicate the intended interpretation of the pronoun. We oa

- (489) Heb je Jan<sub>i</sub>/Marie<sub>i</sub> gezien? Nee, die<sub>i</sub> is ziek.  
 have you Jan/Marie seen no (s)he is ill  
 'Did you see Jan? No, he is ill.'

Example (490) shows that, in contrast to referential personal pronouns, distal demonstratives cannot be bound; they must be disjoint in reference to any °c-commanding antecedent in the same sentence, and thus they behave like referential noun phrases like *het meisje* 'the girl' in this respect. See Section 5.2.1.5, sub III, for more discussion of the binding properties of nominal expressions and Section 5.2.2.1.5 for similar but lightly less strict restrictions concerning construal of the possessive pronoun *diens*.

- (490) a. Marie<sub>i</sub> zei dat zij<sub>i</sub>/\*die<sub>i</sub>/\*het meisje<sub>i</sub> ziek was.  
 Marie said that she/that.one/the girl ill was  
 b. Jan vertelde Marie<sub>i</sub> dat zij<sub>i</sub>/\*die<sub>i</sub>/\*het meisje<sub>i</sub> ontslagen zou worden.  
 Jan told Marie that she/that.one/the girl fired would be

Distal demonstratives and referential personal pronouns also exhibit differences in distribution. First, the distal demonstrative is often preferred in contrastive contexts. When the question in (491a) is answered by means of (491b), it is strongly suggested that the person answering the question did see some other person that may be relevant for the given context; a natural continuation would be a report of what Jan has said. The answer in (491b'), on the other hand, is neutral in this respect. Recall that weak pronouns never occur in clause-initial position: *die* in (491b) can therefore only be replaced by the strong pronoun *haar*. Replacement of the weak pronoun *'r* in (491b') by a distal demonstrative again seems to trigger a contrastive reading.

- (491) a. Heb je Marie<sub>i</sub> nog gesproken? [question]  
 have you Marie PRT spoken  
 'And, did you talk to Marie?'  
 b. Nee, die<sub>i</sub> heb ik niet meer gezien (maar wel Jan). [answer A]  
 no that.one have I no more seen but AFF. Jan  
 'No, I didn't see her again, but I did see Jan.'  
 b'. Nee, ik heb 'r<sub>i</sub> niet meer gezien. [answer A']  
 no I have her no more seen  
 'No, I haven't seen her again.'

Second, the anaphoric behavior of distal demonstratives and referential personal pronouns differs when they occur unstressed in clause-initial position; cf. Haeseryn (1997:307-8) and Van Kampen (2009). In (492), the distal demonstratives cannot refer to the subject of the preceding clause but must refer to the object, whereas the referential pronouns are not restricted in this way.

- (492) a. Jan<sub>i</sub> ontmoette Els<sub>j</sub> en hij<sub>i</sub>/\*die<sub>i</sub> vertelde haar<sub>j</sub> dat ...,  
 Jan met Els and he/that.one told her that  
 b. Jan<sub>i</sub> ontmoette Els<sub>j</sub> en ze<sub>j</sub>/die<sub>j</sub> vertelde hem<sub>i</sub> dat ...,  
 Jan met Els and she/that.one told him that

This is not related to the syntactic function of the antecedent but instead depends on the information structure of its clause. Consider the following discourse chunk, where the continuations in (493b) and (493b') differ in that in the former but not the latter the distal demonstrative in the second conjunct can refer to the subject *de leraar* 'the teacher' of the first conjunct.

- (493) a. Ik zat in de klas.  
 I was in the classroom  
 b. Plotseling kwam de leraar<sub>i</sub> binnen en die<sub>i</sub>/<sup>?</sup>hij<sub>i</sub> zei dat ...  
 suddenly came the teacher inside and that.one/he said that  
 'Suddenly, the teacher entered and he said that ...'  
 b'. De leraar<sub>i</sub> was nog steeds kwaad en hij<sub>i</sub>/\*die<sub>i</sub> zei dat ....  
 the teacher was still angry and he/that.one said that  
 'The teacher was still angry and he said that ...'

This difference seems related to the fact that *de leraar* is preferably interpreted as part of the °focus (new information) of the first conjunct in (493b), but as part of

the presupposition in (493b'). That information structure is involved is also clear from the fact that the distal demonstrative cannot take a referential personal pronoun as its antecedent; such pronouns never function as the focus of the clause and are therefore unsuitable as antecedents for distal demonstratives. This is illustrated by the two examples in (494), which correspond to, respectively, (492b) and (493b).

- (494) a. Jan<sub>i</sub> ontmoette haar<sub>j</sub> en ze<sub>j</sub>/\*die<sub>j</sub> vertelde hem<sub>i</sub> dat ...,  
 Jan met her and she/that.one told him that  
 b. Plotseling kwam hij<sub>i</sub> binnen en hij<sub>i</sub>/\*die<sub>i</sub> zei dat ...  
 suddenly came he inside and he/that.one said that  
 'Suddenly, he entered and he said that ...'

Information structure may also be the key to the apparent free variation in (492b); scrambling of intonationally unmarked noun phrases is restricted to noun phrases that are part of the presupposition of the clause (see Section 8.1.3), and Van Kampen (2009) claims that such scrambled noun phrases cannot function as antecedents of distal demonstratives. The examples in (495) show, however, that the contrast is not as sharp as one might have hoped: it seems that the distal demonstrative is preferred when the antecedent has not scrambled, but some of our informants also accept the distal pronoun when the antecedent has scrambled.

- (495) a. Jan<sub>i</sub> ontmoette gisteren Els<sub>j</sub> en die<sub>j</sub>/ze<sub>j</sub> vertelde hem<sub>i</sub> dat ...,  
 Jan met yesterday Els and that.one/she told him that  
 b. Jan<sub>i</sub> ontmoette Els<sub>j</sub> gisteren en ze<sub>j</sub>/\*die<sub>j</sub> vertelde hem<sub>i</sub> dat ...,  
 Jan met Els yesterday and she/that.one told him that

The judgments on (495b) may be somewhat blurred, however, by the fact that this example becomes fully acceptable as soon the antecedent or the distal pronoun is assigned accent; in the former case the proper noun *Els* will receive a contrastive/emphatic focus reading, which cancels the implication that it belongs to the presupposition of the clause; in the latter case the distal demonstrative does not function as a topic-shift device and, as a result, the requirement that its antecedent be part of the focus of its clause is lifted. Given these complications, we put examples like (495b) aside and leave them for future research.

The examples in (496) show that the antecedent of the distal pronoun cannot be embedded within a potential antecedent of the distal demonstrative: in example (496a), for example, the antecedent of the distal demonstrative is Peter's mother, not Peter. That this is due to the fact that the proper noun is embedded in another noun phrase is clear from the ungrammaticality of (496b) in which the noun phrase embedding the proper noun cannot function as the antecedent of the demonstrative for reasons related to our knowledge of the world.

- (496) a. Plotseling kwam [de moeder [van Peter]<sub>j</sub>]<sub>i</sub> binnen en die<sub>i</sub>/\*ze<sub>i</sub> zei dat ...  
 suddenly came the mother of Peter inside and that.one said that  
 b. \*Plotseling zag ik [de auto [van Peter]]<sub>i</sub> en die<sub>i</sub> zei dat ...  
 suddenly heard I the car of Peter and that.one said that

The discussion of examples (492)-(495) above suggests that the unstressed clause-initial distal demonstrative functions as a topic-shift device in the sense that

it takes (part of) the focus of the preceding clause as its antecedent and presents it as the new discourse topic. Referential personal pronouns, on the other hand, signal that the discourse topic is maintained. See Van Kampen (2009) for more discussion.

To conclude this subsection, we want to note that the use of a distal demonstrative is obligatory in (497b), which may be due to the fact that the pronoun must be stressed. Note, however, that instead of *O, die!* the phrase *O, hij weer!* ‘Oh, him again!’ could also be used.

- (497) a. A: Daar is Jan. B: Wie? A: Jan.  
           there is Jan     who     Jan  
       b. B: O, die/\*hij!  
           oh that one/him

### *B. Left Dislocation*

Left Dislocation constructions like (498) resemble Topicalization constructions, but they differ from them in that they do not involve movement. The left-dislocated element is external to the clause and associated with a resumptive pronoun: when the resumptive pronoun is placed in clause-initial position, as in (498a), it preferably takes the form of a distal demonstrative; when it occupies the °middle field of the clause, as in (498b), the referential personal pronoun gives rise to the best result. The demonstrative in constructions like (498) is normally *die*, unless the antecedent is clearly neuter, as in *Dat meisje*<sub>[+neuter]</sub>, *dat ken ik niet* ‘That girl, I don’t know her’.

- (498) a. Marie, die/\*<sup>°</sup>haar ken ik niet.  
           Marie that.one/her know I not  
           ‘Marie, I don’t know her.’  
       b. Marie, ik ken haar/<sup>°</sup>die niet.  
           Marie I know her/that.one not  
           ‘Marie, I don’t know her.’

Agreement between the left-dislocated element and the demonstrative does not occur, however, when the demonstrative functions as the °logical SUBJECT of a *nominal* predicate; whereas the demonstrative must agree in gender with the dislocated element in the primeless adjectival examples in (499), it cannot agree with it in the primed nominal examples.

- (499) a. Jan, die/\*dat is aardig.  
           Jan that/that is nice  
           ‘Jan, he is nice.’  
       a’. Jan, dat/\*die is een aardige jongen.  
           Jan that/that is a nice boy  
           ‘Jan, he is a nice boy.’  
       b. Jan en Piet, die/\*dat zijn aardig.  
           Jan and Piet those/that are nice  
           ‘Jan and Piet, they are nice.’  
       b’. Jan en Piet, dat/\*die zijn aardige jongens.  
           Jan and Piet that/those are nice boys  
           ‘Jan and Piet, they are nice boys.’

The fact that the demonstrative always has the [+NEUTER] form *dat* in copular constructions with a nominal predicate is clearly related to the fact that *dat* can also appear in such constructions when there is no left-dislocated antecedent, as in the examples in (500). The examples in (501) show that similar facts can be found in the *vinden*-construction.

- (500) a. *Dat/\*Die is een aardige jongen.*  
           that/that is a nice boy  
       b. *Dat/\*Die zijn aardige jongens.*  
           that/those are nice boys
- (501) a. *Jan, dat/\*die vind ik een aardige jongen.*  
           Jan that/that consider I a nice boy  
           ‘Jan, I consider him a nice boy.’  
       a’. *Dat/\*Die vind ik een aardige jongen.*  
       b. *Jan en Piet, dat/\*die vind ik aardige jongens.*  
           Jan and Piet that/those consider I nice boys  
           ‘Jan, I consider them nice boys.’  
       b’. *Dat/\*Die vind ik aardige jongens.*

Note that the same demonstrative would be used if, instead of the subject, the predicate were left-dislocated. In (502), this is illustrated for the copular construction in the primeless, and for the nominal predicate of the *vinden*-construction in the primed examples.

- (502) a. *Een aardige jongen, dat/\*die is Jan.*  
           a nice boy that/that is Jan  
       a’. *Een aardige jongen, dat/\*die vind ik Jan niet.*  
           a nice boy that/that consider I Jan not  
       b. *Aardige jongens, dat/\*die zijn Jan en Peter.*  
           nice boys that/those are Jan and Peter  
       b’. *Aardige jongens, dat/\*die vind ik Jan en Peter niet.*  
           nice boys that/those consider I Jan and Peter not

But, of course, we cannot appeal to this fact in order to account for the contrast between the primeless and primed examples in (499) given that the demonstrative *dat* is also used with the left-dislocated adjectival predicate in (503).

- (503) a. *Aardig, dat/\*die is Jan.*  
           kind that is Jan  
       b. *Aardig, dat/\*die zijn Jan en Peter.*  
           kind that are Jan and Peter

## II. Distal demonstratives in conversation and narratives

Distal demonstratives are frequently used in conversations or narratives to introduce discourse entities which are not part of the topic of the discourse, but which are nevertheless presented as “familiar”. In a discussion about corruption in the army, an example like (504) could be used to introduce another example of corruption that was not mentioned earlier but can be expected to be known to the participants in the



conversation. Using a proximate demonstrative in this context would lead to an infelicitous result.

- (504) En dan is er nog die/<sup>??</sup>deze kwestie van drugssmokkel door die mariniers.  
 and then is there PRT that/this case of smuggling drugs by those marines  
 'And then there is that case of smuggling drugs by those marines.'

Note that the PP-modifier of the noun phrase in (504) also contains a distal demonstrative. It seems that this is a hallmark of this type of noun phrases; especially in colloquial Dutch, PP-modifiers containing another distal demonstrative are frequently used to identify certain persons. The PP is usually introduced by *van* 'of', but other prepositions are possible as well. In example (505a), for instance, some person is identified as the man who plays in a certain TV-commercial, in (505b) reference is made to a friend the speaker met at a trip to Rome, in (505c) the person in question is uniquely identified by mentioning the kind of car he drives.

- (505) a. Hé, dat is die man van dat reclamespotje!  
 hey that is that man from the commercial  
 'Hey, that is the man from this commercial!'  
 b. Die vriendin van die reis naar Rome komt vanavond eten.  
 that friend of that trip to Rome comes tonight eat  
 'This friend I met on this trip to Rome is coming to dinner tonight.'  
 c. Die vent met die BMW is ook weer thuis.  
 that bloke with the BMW is also again home  
 'This bloke with the BMW is back again.'

When the demonstrative is used anaphorically, that is, when the discourse topic is not physically present, the use of the distal demonstrative is also much preferred. For example, when talking about a certain man or boy, who is not present, one does not use the proximate demonstrative *deze* 'this' in (506a&b); this would only be possible when the speaker is able to point at that person. Similar observations can be made when reference is made to a certain time (span): one would not use the proximate demonstrative *deze* in an example like (506c) unless one were able to point to a certain day on a calendar, and using the proximate demonstrative *dit* 'this' in *dit moment* in (506d) is only possible if the phrase refers to the speech time, which is incompatible with the use of the past tense in this example.

- (506) a. Zegt die/<sup>#</sup>deze vent ineens ...  
 says that/this guy suddenly  
 'Suddenly, this guy says ...'  
 b. Die/<sup>#</sup>Deze jongen werd natuurlijk erg boos.  
 that/this boy became of course very angry  
 c. Die/<sup>#</sup>Deze dag kom ik niet.  
 that/this day come I not  
 d. Hij zei op dat/\*dit moment even niets.  
 he said at that/this time for.a.moment nothing

### III. Distal demonstratives in imperatives

In imperatives, the choice of the demonstrative depends on the position of the noun phrase in the clause. First, consider the examples in (507), which shows that a direct object normally precedes the particle of a particle verb like *neerleggen* 'to put down'.

- (507) a. Jan legt de/deze/die bal neer.  
 Jan puts the/this/that ball down  
 b. \*Jan legt neer de/deze/die bal.

When the verb takes the imperative form, the direct object can, of course, also precede the particle, as is shown in (508a), but (508b) shows that the object can also follow the particle provided that the determiner is the distal demonstrative *die*; when the determiner is the definite article or the proximate demonstrative *deze*, this order is unacceptable.

- (508) a. Leg de/deze/die bal neer!  
 put the/this/that ball down  
 b. Leg neer die/\*deze/\*de bal!  
 put down that/this/the ball

In imperative constructions in which the verb has the infinitival form, the particle can also be followed by a direct object headed by a distal demonstrative, as in (509a), and something similar happens in imperative constructions in (509b) without a verb form; observe that in the latter case the direct object can be optionally preceded by the preposition *met* 'with'. For a more extensive discussion of these imperative constructions, see Den Dikken (1992).

- (509) a. Neerleggen die/\*deze/\*de bal!  
 put.down<sub>infinitive</sub> that/this/the ball  
 b. Het huis uit (met) die/?deze/?de bal!  
 the house out.of with that/this/the ball

### IV. Distal demonstratives in evaluative contexts

The distal demonstratives *die/dat* can also be used to express a (mostly negative) evaluation. Under the evaluative reading, the examples in (510) require a distal demonstrative: the proximate demonstratives *deze* and *dit* are only compatible with a truly deictic meaning.

- (510) a. Die/<sup>#</sup>Deze rotmol<sub>[-neuter]</sub> heeft weer gaten in het gazon gemaakt!  
 this/these damn'd mole has again holes in the lawn made  
 'That damn'd.mole has made holes in the lawn again!'  
 b. Dat/<sup>#</sup>Dit rotbeest<sub>[+neuter]</sub> heeft weer gaten in het gazon gemaakt!  
 this/these damn'd.animal has again holes in the lawn made  
 'That damn'd animal has made holes in the lawn again!'

In these evaluative contexts, the noun phrase may also contain a proper noun provided that the latter is modified by a non-restrictive adjectival phrase expressing some subjective evaluation on the part of the speaker, as in (511a&b); when the

modifier does not allow such an evaluative interpretation, as in (511c), the result is infelicitous.

- (511) a. Die/\*deze vreselijke Van Dijk! [negative subjective evaluation]  
           that/this horrible Van Dijk  
       b. Die/\*deze lieve Peter! [positive subjective evaluation]  
           that/this sweet Peter  
           ‘Sweet Peter!’  
       c. \*Die grote Peter! [no subjective evaluation]  
           that big Peter

In those cases where an article is part of the name, as in *De Amstel* ‘the Amstel’ or *De Alpen* ‘the Alps’, the non-restrictive interpretation of the modifying AP is available both with the definite article and the D-linked demonstrative determiner, as shown in (512). The difference between the two constructions is subtle: with the definite article the modifier serves a descriptive role, whereas with the demonstrative it takes on a more evaluative role.

- (512) a. Die/De prachtige, blauwe Amstel!  
           that/The splendid blue Amstel  
           ‘That splendid, blue Amstel!’  
       b. Die/De adembenemende Alpen!  
           those/The breathtaking Alps  
           ‘Those breathtaking Alps!’

#### V. Spurious distal demonstratives

In the examples in the previous subsection, the demonstrative force of the demonstratives seems considerably weakened. This subsection will discuss some cases in which the pronoun *die* has lost its demonstrative force entirely. One example is the use of the distal demonstrative in front of a proper noun (which normally resists a determiner) in amicable greeting formulas like (513a). Note that the pronoun does not agree in gender with the proper noun following it: diminutives like *Jantje* are neuter, and hence we would expect the neuter demonstrative *dat*, which does indeed appear in examples like (513b), where we are dealing with true demonstratives. This suggests that *die* is a spurious demonstrative in (513a).

- (513) a. Ha, die/\*dat/\*deze Jantje!  
           hey that/that/this Jan<sub>dim</sub>  
       b. Praten we nu over dít of dát Jantje?  
           talk we now about this or that Jan<sub>dim</sub>  
           ‘Are we talking about this or that Jantje?’

A similar spurious use of the distal demonstrative can be found in exclamations of the type in (514). Constructions of this kind express (positive) surprise on the part of the speaker, along the lines of “Wim prime minister; who would have thought it!”. Interestingly, there is gender agreement between determiner and noun in (514a&b), but not with the diminutive proper noun in (514c): here the non-neuter demonstrative determiner *die* is combined with a neuter noun.

- (514) a. Die Wim toch! Minister-president!  
           that Wim PRT prime minister  
       b. Dat Duitsland toch! Zomaar wereldkampioen!  
           that Germany PRT like.that world champion  
       c. Die/\*Dat Marietje toch! In een keer geslaagd!  
           that Marie<sub>dim</sub> PRT in one time passed

A final case of a spurious demonstrative *die* is given in (515). Actually, in this example we are also dealing with a spurious preposition *van*; the *van*-PP occurs in a position in which normally only noun phrases can be used, as is shown in (515b). For more discussion of this construction, see Sections 4.1.1.6.1, sub II, and P1.4.

- (515) a. Jan kocht van die lekkere koekjes.  
           Jan bought of these tasty cookies  
           ‘Jan bought these tasty cookies.’  
       b. Jan kocht lekkere koekjes.  
           Jan bought tasty cookies

#### 5.2.3.2.3. Proximate demonstrative pronouns

Generally speaking, proximate demonstratives are always used deictically: the speaker must be able to point at the referent of the noun phrase containing the demonstrative. There are only two exceptions to this rule. First, the proximate demonstrative can be used anaphorically when it has a linguistic antecedent in the immediately preceding discourse. The pronoun must then refer to the noun phrase immediately preceding it; in other words, *deze* in (516a) can only refer to *Peter*, not to *Jan*. The latter would be preferred when the personal pronoun *hij* ‘he’ or the distal demonstrative is used, as in (516b).

- (516) Jan ontmoette gisteren Peter en ...  
       Jan met yesterday Peter and  
       ‘Jan met Peter yesterday ...’  
       a. ... deze vertelde hem dat ...  
           ... this one (= Peter) told him (= Jan) that  
       b. ... hij/die vertelde hem dat ...  
           ... he/that one (= Jan) told him (= Peter) that

Second, proximate (but not distal) demonstratives can also be used with an anticipatory function: in (517) the demonstrative functions as an anticipatory pronoun referring to what follows the colon. Note that, as is to be expected in a copular construction, the demonstrative agrees in gender with the noun phrase *de zaak/het geval*.

- (517) a. De zaak is deze/\*die: Jan is ontslagen en ...  
           the issue is this/that: Jan is fired and  
       b. Dit/\*Dat is het geval: Jan is ontslagen en ...  
           this/that is the case: Jan is fired and

The examples in (518) are similar in that the demonstrative is an anticipatory pronoun introducing the clausal modifier following the noun. Observe that in the fixed expression in (518b), the case-inflected distal demonstrative *dien* is used.

- (518) a. met dit/<sup>??</sup>dat verschil dat Jan het vrijwillig doet en Els gedwongen.  
with this/that difference that Jan it voluntarily does and Els forced  
'With this difference that Jan does it voluntarily, whereas Els is forced to do it.'
- b. met dien verstande dat ...  
with that provision that  
'provided (that) ...'

#### 5.2.3.2.4. *The non-D-linked demonstratives zo'n and zulke used as amplifiers*

Although *zo'n* and *zulke* 'such (a)' normally function as demonstrative determiners, they can also be used as °amplifiers with the loss of their original demonstrative function. In the examples in (519), for instance, *zo'n* and *zulke* do not refer to particular, identifiable type(s) of headache, hunger or ideas, but indicate that the headache(s) and hunger are quite severe, or that the ideas are very weird.

- (519) a. Ik heb zo'n pijn in mijn hoofd.  
I have such a pain in my head  
'I have such a terrible headache.'
- b. Ik heb zo'n honger.  
I have such a hunger  
'I am so hungry.'
- c. Hij heeft soms zulke hevige hoofdpijnen.  
he has sometimes such fierce headaches  
'He sometimes has such terrible headaches.'
- d. Jan heeft soms zulke rare ideeën.  
Jan has sometimes such weird ideas  
'Sometimes Jan has such weird ideas.'

#### 5.2.3.2.5. *The emphatic modifier zelf 'himself'*

The emphatic element *zelf* 'himself' is traditionally also considered a demonstrative pronoun. However, it does not occur in prenominal position and it can be used as a modifier not only of full noun phrases, but also of a proper nouns and pronouns. Although this is not so clear from (520a'), example (520b') shows that the pronoun and the emphatic modifier can at least sometimes be considered a constituent (the °constituency test).

- (520) a. Die man/Jan wil dat boek zelf lezen.  
that man/Jan wants that book himself read  
'That man likes to read that book himself.'
- a'. <sup>??</sup>Die man zelf wil dat boek lezen.
- b. Hij wil dat boek zelf lezen.  
he wants that book himself read  
'He wants to read that book himself.'
- b'. Hij zelf wil dat boek lezen.

Let us provisionally assume that it holds for all occurrences of *zelf* that it forms a constituent with the noun phrase it modifies at at least some stage of the derivation, that is, that it functions as a kind of °floating quantifier. Such an assumption would account for the fact illustrated by the contrast in (521) that *zelf* requires a noun phrase associate to be present: if *zelf* is generated as the modifier of a noun phrase, the presence of the former of course implies the presence of the latter.

- (521) a. De man leest het boek zelf.  
           the man read the book himself  
           ‘The man is reading the book himself.’  
       b. \*Het boek wordt zelf gelezen.  
           the book is himself read  
           ‘The book is read himself.’

If the suggested proposal is on the right track, the fact that the modifier *zelf* and its noun phrase associate can be discontinuous leads to the conclusion that they can be split in the course of derivation by movement. The structure of the topicalization constructions in the primed examples in (520) would then be something like that given in (522).

- (522) Die man/Hij<sub>i</sub> wil dat boek [ *t<sub>i</sub>* zelf] lezen.

Furthermore, we must assume that °scrambling may also result in a split pattern. This is clear from the primed examples in (523), where the surface position of the direct object is the result of scrambling.

- (523) a. Ik heb gisteren de directeur zelf gesproken.  
           I have yesterday the director himself spoken  
           ‘Yesterday I spoke to the director himself.’  
       a’. Ik heb de directeur<sub>i</sub> gisteren [ *t<sub>i</sub>* zelf] gesproken.  
       b. Ik heb gisteren hem zelf gesproken.  
           I have yesterday him himself spoken  
           ‘Yesterday I spoke to him himself.’  
       b’. Ik heb hem<sub>i</sub> gisteren [ *t<sub>i</sub>* zelf] gesproken.

An argument in favor of the movement analysis above is that the split cannot occur when *zelf* modifies a noun phrase that is the complement of a preposition: under this analysis the noun phrase and *zelf* form a constituent, so that movement of the string *met de directeur* would involve movement of a non-constituent and (524b) would correctly be predicted to be ungrammatical under the intended reading.

- (524) a. Ik heb gisteren [<sub>PP</sub> met [[de directeur] zelf]] gesproken.  
           I have yesterday with the director himself spoken  
           ‘Yesterday, I spoke with the manager director himself.’  
       b. \*Met de directeur heb ik gisteren zelf gesproken.

Note that example (524b) is acceptable under a reading where *zelf* modifies the subject pronoun. This may give rise to the idea that the intervention of the subject

blocks the intended reading. It seems, however, that this kind of intervention effect does not occur with *zelf*: in (525a) *zelf* can be equally well construed with the subject as with the object pronoun. Note, however, that when *zelf* is placed in front of the adverbial phrase, as in (525b), the sentence is unambiguous; *zelf* can then only be construed with the direct object, which indicates that its position is the result of °pied piping.

- (525) a. Ik<sub>i</sub> heb hem<sub>j</sub> gisteren [ t<sub>i/j</sub> zelf] gesproken.  
 I have him yesterday myself/himself spoken  
 'I have spoken to him myself/himself, yesterday.'  
 b. Ik heb [[hem] zelf] gisteren gesproken.  
 I have him himself yesterday spoken  
 'I have spoken to him himself, yesterday.'

Note in passing that the fact that (525a) is ambiguous apparently supports the assumption in traditional grammar (cf. Haeseryn et al. 1997: 1185) that *zelf* functions as a kind of °supplementive, which exhibits the same kind of ambiguity. This assumption is, however, undermined by the fact that *zelf* can also occur within the PP in (524), an option that does not arise with supplementives, which are only predicated of subjects and direct objects. The analysis according to which *zelf* is generated as a modifier within the noun phrase seems therefore superior.

Example (526a) shows that it is also possible to topicalize the modifier *zelf* in isolation, provided that it is assigned emphatic/contrastive accent. It seems, however, that this option is more or less restricted to those cases where *zelf* modifies the subject of the clause; the reading of (526b'), where *zelf* is construed with the direct object, seems degraded, whereas the reading in (526b), where it is construed with the subject, sounds completely natural.

- (526) a. ZELF heb ik dat boek niet gelezen (maar JAN wel).  
 myself have I that book not read but Jan AFF  
 'I didn't read that book myself (but Jan did).'
- b. ZELF heb ik de directeur nooit gesproken (maar Jan wel).  
 myself have I the director never spoken but Jan AFF  
 'I never spoke the managing director myself (but Jan did).'
- b'. ??ZELF heb ik de directeur nooit gesproken  
 himself have I the director never spoken  
 (maar zijn secretaresse wel).  
 but his secretary AFF  
 'I never spoke the managing director himself (but I did speak his secretary).'

Under neutral intonation, scrambling of *zelf* in isolation seems marked. Example (527) illustrates this for a case in which *zelf* modifies the subject of the clause; the marked order improves when we assign emphatic accent to the modifier *zelf*. Note that this supports our conclusion that the order in (525b) must be the result of pied piping by the scrambled object.

- (527) Jan heeft dat boek <ZELF/?zelf> gisteren <zelf> opgeborgen.  
 Jan has that book himself yesterday put.away  
 'Jan has put away that book himself yesterday.'

Finally, observe that the use of the emphatic modifier may occasionally give rise to confusion with the reflexive pronoun *zichzelf* 'himself'. Example (528a) shows that the emphatic modifier *zelf* can also be used in clauses containing an inherently reflexive predicate like *zich vergissen* 'to be mistaken'. In this case, confusion with the reflexive pronoun does not readily arise, given that *vergiszen* cannot be used as a transitive verb. However, when the verb can also be used transitively, like *wassen* 'to wash', it is often not so easy to make the proper distinction. The main difference between the inherently reflexive construction in (528b) and the transitive construction in (528b') is that in the former emphatic accent must be given to the modifier. For more information on the reflexives *zichzelf* and *zich*, see Section 5.2.1.5.

- (528) a. Jan vergist zich zelf.  
 Jan is.mistaken REFL himself  
 b. Jan wast zich ZELF  
 Jan washes REFL himself  
 'Jan is washing (and he is doing it) himself.'  
 b'. Jan wast zichzelf (niet zijn auto).  
 Jan washing himself not his car  
 'Jan is washing himself (not his car).'

### 5.3. Bibliographical notes

Much has been written about the function of (in)definiteness. Two influential studies on this topic are Hawkins (1978) and Heim (1982), both of which take a semantico-pragmatic approach. For an overview of the various logical, semantic and pragmatic approaches, see Keizer (1992a) and Alexiadou et al. (2007: part II). For discussions of the formal semantic aspects of (in)definiteness, the speaker is referred to Reuland & Ter Meulen (1989). Other formal semantic discussions of indefiniteness are Diesing (1992) and Ruys (1993).

An overview of the Dutch determiner system can be found in Haeseryn et al. (1997: 813ff.). Coppen (1991) discusses the position of determiners, quantifiers and numerals within the Dutch noun phrase from the point of view of the government-and-binding framework of generative grammar, Montague grammar and computational linguistics; De Jong (1991) does so from the point of view of X-bar Theory and the theory of generalized quantifiers. Bhatt (1990) is concerned with the structure of the noun phrase, the position of determiners and quantifiers and the role of functional categories; although the discussion is based on data from German, the theoretical considerations are also of interest for Dutch. In part II and IV of Alexiadou et al. (2007), a discussion can be found of some recent generative approaches to, respectively, the determiner system and possessive constructions with possessive pronouns and genitive noun phrases.

A large number of studies on (in)definiteness within the noun phrase have been written within the framework of generalized quantifiers (Barwise and Cooper 1981). For a discussion of Dutch determiners and quantifiers, see De Jong & Verkuyl (1985); De Hoop & De Swart (1990) deals with both English and Dutch. The use of definite and indefinite articles in generic sentences is extensively discussed in Oosterhof (2008). For a discussion of the negative determiner *geen* 'no', see



Klooster (2001b), as well as parts of Haegeman (1995). Finally, a discussion of determiner sharing (in general with some Dutch data) can be found in Ackema and Szendrői (2002). For further discussion and references, see Chapter 6.

# Chapter 6

## Numerals and quantifiers

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## Introduction

This chapter will discuss the use of numerals and quantifiers within the nominal °projection. Generally speaking, these elements occur in prenominal position after the determiners, as in (1a&b). This can be accounted for by assuming that the structure of the noun phrase is as given in (1c), where D indicates the position of the determiners and NUM/Q the position that can be occupied by a numeral or a quantifier. We will see, however, that, especially in the case of quantifiers, there are several deviant patterns that cannot be readily accounted for by means of the structure in (1c).

- (1) a. de drie boeken  
the three books  
b. de vele problemen die hij had  
the many problems that he had  
c. [DP D [NUMP NUM/Q [NP ... N ...]]]

We will start in Section 6.1 with a discussion of the numerals. Section 6.2 will be concerned with the quantifiers. Section 6.3 conclude this chapter with a more detailed discussion of so-called °quantitative *er*, given that this element may only occur in association with indefinite noun phrases that contain a cardinal number or a well-defined subset of quantifiers: *Ik heb er* [<sub>NP</sub> twee/veel [*e*]] ‘I have got two/a lot of them’.

## 6.1. Numerals

Traditionally two types of numerals are distinguished: cardinal numerals like *vijf* ‘five’ and ordinal numerals like *vijfde* ‘fifth’. These two types of numerals will be discussed in separate sections.

### 6.1.1. Cardinal numerals

This section starts in 6.1.1.1 with a discussion of the form of the cardinal numerals. It will be shown that the rules for coining numerals are pretty complex and allow a relatively large amount of variation. Section 6.1.1.2 focuses on the semantics of the numerals, and will show that determiner-less noun phrases normally allow two readings, which we will refer to as the indefinite and the partitive reading. Section 6.1.1.3 discusses the position of the numerals within the noun phrase. Finally, Section 6.1.1.4, discusses modification of the numerals.

#### 6.1.1.1. Simple and compound forms

The rules for the formation of complex cardinal numerals are themselves rather complex and often leave room for several alternative options. Three processes may be involved; see also Booij (2010:ch.8). The first is DERIVATION, that is, cases where the complex form is derived by means of a bound morpheme. This is mainly the case with the formation of those numerals from 20 to 90 that correspond to multiples of 10; two examples are given in (2a). The second process seems to involve COMPOUNDING, and forms complex cardinal numerals from simpler ones that can occur independently. It must be noted, however, that at least some of these

complex forms may plausibly be analyzed as phrases, which is also reflected in the orthographical rules, which require some of these complex numerals to be written as one word, but others as separate words; some examples are given in (2b). Finally, complex numerals can be formed by means of COORDINATION with *en* ‘and/plus’, as in (2c). Although this process results in formations that are phrase-like, the orthographic rules require a complex form to be written as a single word when it refers to a number below 100, which may be related to the fact that the element *en* must be obligatorily realized in such cases. The complex numerals above 100, on the other hand, must be written as separate words, which may be related to the fact that the conjunction *en* is optional in these cases.

- (2) a. Derivation: *vijf-tig* (50), *zes-tig* (60)  
 b. Compounding: *vijf-tien* (15), *vijf-honderd* (500), *zes miljoen* (6,000,000)  
 c. Coordination: *vijfenvijftig* (55), *honderd (en) vijf* (105)

Example (3) provides the cardinal numerals from 0 to 19. The numerals corresponding to 0 to 12 (given in small caps) are all base forms. The remaining numerals are compound-like with the numeral *tien* acting as the second member of the compound. The first member is one of the numerals corresponding to 5 to 9, or one of the irregular bound morphemes *der-* and *veer-*, which also feature in *dertig* ‘thirty’ and *veertig* ‘forty’ (these irregular forms are given in italics).

(3) The numerals 0 to 19

|   |       |    |                   |
|---|-------|----|-------------------|
| 0 | NUL   | 10 | TIEN              |
| 1 | ÉÉN   | 11 | ELF               |
| 2 | TWEE  | 12 | TWAALF            |
| 3 | DRIE  | 13 | <i>der-tien</i>   |
| 4 | VIER  | 14 | <i>veer-tien</i>  |
| 5 | VIJF  | 15 | <i>vijf-tien</i>  |
| 6 | ZES   | 16 | <i>zes-tien</i>   |
| 7 | ZEVEN | 17 | <i>zeven-tien</i> |
| 8 | ACHT  | 18 | <i>acht-tien</i>  |
| 9 | NEGEN | 19 | <i>negen-tien</i> |

Example (4) shows that the numerals corresponding to the multiples of 10 from 20 to 90 all feature the bound morpheme *-tig*. Most of these forms are regular derivations from the simple numerals in Example (3), but there are also less regular formations. The first is *twintig* ‘twenty’, in which the morpheme *-tig* is attached to the form *twin-*, which does not appear elsewhere in the numeral system. Other more or less irregular forms are *dertig* ‘thirty’ and *veertig* ‘forty’, which are derived from the bound morphemes *der-* and *veer-*, which also appear in *dertien* ‘thirteen’ and *veertien* ‘fourteen’. Finally, there is *tachtig* ‘eighty’ where the first morpheme features a /t/ in the onset which is not found in the base form *acht* ‘eight’. The remaining numbers between 20 and 100 are phrase-like, and are built up by means of coordination of one of the numerals from 1 to 9 and one of the forms in the first column in example (4) by means of the conjunction-like element *en*. As was mentioned above, these combinations are written as single words; the ortho-

graphical system apparently treats these combinations as compounds employing the “binding” morpheme *-en-*. Some examples are given in the second and third columns of the table in (4).

(4) Numerals from 20 to 100

|    |                  |    |               |    |                 |
|----|------------------|----|---------------|----|-----------------|
| 20 | <i>twin-tig</i>  | 21 | éénentwintig  | 29 | negenentwintig  |
| 30 | <i>der-tig</i>   | 31 | éénendertig   | 39 | negenendertig   |
| 40 | <i>veer-tig</i>  | 41 | éénenveertig  | 49 | negenenveertig  |
| 50 | <i>vijs-tig</i>  | 51 | éénenvijftig  | 59 | negenenvijftig  |
| 60 | <i>zes-tig</i>   | 61 | éénenzestig   | 69 | negenenzestig   |
| 70 | <i>zeven-tig</i> | 71 | éénenzeventig | 79 | negenenzeventig |
| 80 | <i>tacht-ig</i>  | 81 | éénentachtig  | 89 | negenentachtig  |
| 90 | <i>negen-tig</i> | 91 | éénennegentig | 99 | negenennegentig |

The first column of table (5) gives the names of the numerals that correspond to 10 to the power of 2, 3, 6, 9 and 12. Names for larger numbers do exist, but these are normally not found in colloquial speech. Numerals referring to multiples of these numbers are again compound-like and are normally formed by placing one of the numerals between 0 and 999 in front of the numeral in the first column of table (5). In the second and third column some examples are given.

(5) Higher numeral (round figures)

|                  |         |                    |              |                      |                     |
|------------------|---------|--------------------|--------------|----------------------|---------------------|
| 10 <sup>2</sup>  | honderd | 2·10 <sup>2</sup>  | tweehonderd  | 12·10 <sup>2</sup>   | twaaifhonderd       |
| 10 <sup>3</sup>  | duizend | 2·10 <sup>3</sup>  | tweeduizend  | 500·10 <sup>3</sup>  | vijfhonderdduizend  |
| 10 <sup>6</sup>  | miljoen | 2·10 <sup>6</sup>  | twee miljoen | 500·10 <sup>6</sup>  | vijfhonderd miljoen |
| 10 <sup>9</sup>  | miljard | 2·10 <sup>9</sup>  | twee miljard | 500·10 <sup>9</sup>  | vijfhonderd miljard |
| 10 <sup>12</sup> | biljoen | 2·10 <sup>12</sup> | twee biljoen | 500·10 <sup>12</sup> | vijfhonderd biljoen |

Four additional remarks on the higher cardinal numerals in Example (5) are in order.

*I. Numerals corresponding to the multiples of 100 between 1,000 and 10,000*

The majority of the numerals corresponding to the multiples of 100 between 1,000 and 10,000 can be realized in more than one ways. One option is to use a compound which takes *-honderd* as its second member: it seems that in speech this is the only option for the multiples of 100 between 1100 and 2000.

- (6)
- a. elfhonderd [1,100]

b. twaaifhonderd [1,200]

c. dertienhonderd [1,300]

d. veertienhonderd [1,400]

e. vijftienhonderd [1,500]

f. zestienhonderd [1,600]

g. zeventienhonderd [1,700]

h. achttienhonderd [1,800]

i. negentienhonderd [1,900]

An alternative form is regularly used for multiples of 100 between 2,000 and 10,000, so that the regular forms in the primeless examples of (7) alternate with the forms in the primed examples.

- |     |    |                      |     |                          |          |
|-----|----|----------------------|-----|--------------------------|----------|
| (7) | a. | vijfentwintighonderd | a'. | tweeduizend vijfhonderd  | [2,500]  |
|     | b. | drieënveertighonderd | b'. | vierduizend driehonderd  | [4,300]  |
|     | c. | vierentachtighonderd | c'. | achtduizend vierhonderd  | [8,400]  |
|     | d. | tweënnegentighonderd | d'. | negenduizend tweehonderd | [9,2000] |

This does not hold, at least not in colloquial speech, for the numbers 2100, 3100, etc. These numbers are normally expressed by means of the regular compound with *-honderd*; using the forms in the primed examples of (8) is possible provided that the numeral *één* is included but it feels somewhat emphatic and artificial.

- |     |    |                     |     |                            |         |
|-----|----|---------------------|-----|----------------------------|---------|
| (8) | a. | éénentwintighonderd | a'. | tweeduizend *(één) honderd | [2,100] |
|     | b. | éénendertighonderd  | b'. | drieduizend *(één) honderd | [3,100] |
|     | c. | éénenveertighonderd | c'. | vierduizend *(één) honderd | [3,100] |

Compound forms with *-honderd* are never used for the multiples of 1000 in (9a-d). The same thing holds for numbers over 10,000. This is illustrated in (9e).

- |     |    |                         |     |                       |          |
|-----|----|-------------------------|-----|-----------------------|----------|
| (9) | a. | duizend                 | a'. | *tienhonderd          | [1,000]  |
|     | b. | tweeduizend             | b'. | *twintighonderd       | [2,000]  |
|     | c. | drieduizend             | c'. | *dertighonderd        | [3,000]  |
|     | d. | tienduizend             | d'. | *honderdhonderd       | [10,000] |
|     | e. | tienduizend vijfhonderd | e'. | *honderdenvijfhonderd | [10,500] |

## II. Compound numerals of which the first part exceeds 1000

Occasionally, the first part of a compound-like form is a numeral higher than 1000, as in the primeless examples of (10). In these cases speakers tend to use yet another way of expressing the number, examples of which are given in the primed examples. This option is restricted to fairly round figures; for other cases see the examples in (13) below.

- |      |    |                         |     |                           |                     |
|------|----|-------------------------|-----|---------------------------|---------------------|
| (10) | a. | twaaalfhonderd duizend  | a'. | één komma twee miljoen    | [1,200,000]         |
|      |    | twelve hundred thousand |     | one comma two million     |                     |
|      | b. | twaaalfhonderd miljoen  | b'. | één komma twee miljard    | [1,200,000,000]     |
|      |    | twelve hundred million  |     | one comma two billion     |                     |
|      | c. | twaaalfhonderd biljoen  | c'. | één komma twee biljoen    | [1,200,000,000,000] |
|      |    | twelve hundred billion  |     | one comma two quadrillion |                     |

Of course, this way of expressing the numerals in (10) is related to the fact that in Dutch the comma is used to divide a whole number from a decimal portion instead of the period (as in English). Thus, *één komma twee miljoen* corresponds to *one point two million* in English.

## III. Numerals preceded by an article and/or (ander-)half

The second and third columns of the table in (5) show that the orthographic conventions are somewhat complex: the compound-like forms derived from *honderd* 'hundred' and *duizend* are treated as single words, whereas the complex forms based on *miljoen*, *miljard* and *biljoen* are written as two separate words. This may be related to the fact that the latter forms seem to have noun-like properties that are missing, or at least less prominent, in the case of *honderd* and *duizend*. Two of

these properties are the ability to be preceded by the indefinite article *een* ‘a’ and the ability of taking a modifier like *half* ‘half’ or *kwart* ‘quarter’; this is shown in the primeless and singly-primed examples in (11). Still there is need for some caution: the doubly-primed examples show that all forms allow plural formation, which is also a nominal property, and a Google search revealed that the forms marked with a star do occur on the internet, especially with nouns indicating a measure unit like *euro* or *kilometer*.

- (11) a. <sup>#</sup>een honderd boeken a'. \*een half honderd boeken a''. honderden boeken  
a hundred books a half hundred books hundreds [of] books  
b. <sup>#</sup>een duizend boeken b'. \*een half duizend boeken b''. duizenden boeken  
a thousand books a half thousand books thousands [of] books  
c. een miljoen boeken c'. een half miljoen boeken c''. miljoenen boeken  
a million books a half million books millions [of] books  
d. een miljard boeken d'. een half miljard boeken d''. miljarden boeken  
a billion books a half billion books billions [of] books  
e. een biljoen boeken e'. een half biljoen boeken e''. biljoenen boeken  
a quadrillion books a half quadrillion books quadrillions [of] books

The examples in (11a&b) are unacceptable on the intended reading but marked with a number sign because they are possible with an approximate reading “about a hundred/thousand books”. This reading is not relevant here, since in that case we are dealing with one of the spurious uses of the indefinite article; cf. Section 5.1.4.3, sub II. Note further that example (11b') involving *duizend*, contrasts sharply with examples like (12b&b'), which offers a third option in addition the (a)-examples in (7); this contrast does not show up in the case of *honderd*.

- (12) a. \*anderhalf honderd boeken a'. \*tweeëneenhalf honderd boeken  
one.and.a.half hundred books two.and.a.half hundred books  
b. <sup>(?)</sup>anderhalf duizend boeken b'. tweeëneenhalf duizend boeken  
one.and.a.half thousand books two.and.a.half thousand books  
c. anderhalf miljoen boeken c'. tweeëneenhalf miljoen boeken  
one.and.a.half million books two.and.a.half million books  
d. anderhalf miljard boeken d'. tweeëneenhalf miljard boeken  
one.and.a.half billion books two.and.a.half billion books  
e. anderhalf biljoen boeken e'. tweeëneenhalf biljoen boeken  
one.and.a.half quadrillion books two.and.a.half quadrillion books

#### IV. The conjunction *en* ‘and’

The remaining numerals are phrase-like in nature. The several subparts of the numeral are generally optionally conjoined by means of the conjunction *en*. Some examples are given in (13). Note that, in contrast to *honderd* and *duizend*, the elements *miljoen* and *miljard* are obligatorily preceded by the numeral *één*.

- (13) a. honderd (en) vierentwintig [124]  
hundred and twenty-four  
b. duizend (en) vierentwintig [1,024]  
thousand and twenty-four

- c. één miljoen (en) tweeduizend (en) vierentwintig [1,002,024]  
 one million and two.thousand and twenty.four
- d. één miljard (en) drie miljoen (en) tweeduizend (en) vierentwintig [1,003,002,024]  
 one billion and three million and two.thousand and twenty.four

#### 6.1.1.2. Semantics

The easiest way to explain the core meaning of the cardinal numerals is by using Figure 1 from Section 1.1.2.2.1, repeated below, to represent the subject-predicate relation in a clause. In this figure, A represents the denotation set of the subject NP and B the denotation set of the verb phrase, where A and B are both contextually determined, that is, dependent the domain of discourse (domain D). The intersection  $A \cap B$  denotes the set of entities for which the proposition expressed by the clause is claimed to be true. In an example like *Jan wandelt op straat*, for example, it is claimed that the set denoted by A, viz. {Jan}, is included in set B, which is constituted by the people walking in the street. In other words, it expresses that  $A - (A \cap B) = \emptyset$ .

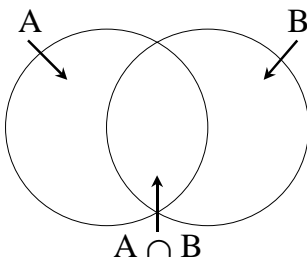


Figure 1: Set-theoretic representation of the subject-predicate relation

The semantic function of the cardinal numerals is to indicate the size or cardinality of the intersection of A and B. In (14a), for example, the numeral *twee* 'two' indicates that the cardinality of the intersection  $A \cap B$  is 2.

- (14) a. Er lopen twee jongens op straat.  
 there walk two boys in the.street  
 'Two boys are walking in the street.'
- b.  $\emptyset$  twee  $N_{pl}$ :  $|A \cap B| = 2$

Normally, the numerals do not give any information about the remainder of set A, that is,  $A - (A \cap B)$  may or may not be empty. Information like this is usually expressed by means of the determiners: in addition to the information expressed by the numeral that the cardinality of the intersection of A and B is 2, the definite determiner *de* in (15a) expresses that  $A - (A \cap B)$  is empty.

- (15) a. De twee jongens lopen op straat.  
 the two boys walk in the.street  
 'The two boys are walking in the street.'
- b. *de twee*  $N_{pl}$ :  $|A \cap B| = 2$  &  $A - (A \cap B) = \emptyset$



In the absence of the definite determiner, it is the sentence type that provides additional information about the cardinality of  $A - (A \cap B)$ . In (14a), for example, the sentence contains the °expletive *er* and is therefore presentative; the subject introduces a set of new entities into the domain of discourse, and from this we may conclude that there was no mention of boys in the domain of discourse before the sentence was uttered. The most plausible reading is therefore one according to which  $A - (A \cap B) = \emptyset$ .

It seems, however, that we are dealing here instead with a conversational implicature (Grice 1975) than with syntactically or lexically encoded information. The first reason to assume this is that the implication that  $A - (A \cap B)$  is empty is absent in non-representative clauses. In (16a), for example, the subject is interpreted as specific, that is, at least known to the speaker, and now the implication that all boys in the domain of discourse are part of the intersection of  $A$  and  $B$  is absent.

- (16) a. twee jongens lopen op straat  
           two boys       walk in the.street  
           ‘Two boys are walking in the street.’  
       b.  $\emptyset$  twee  $N_{pl}$ :  $|A \cap B| = 2$  &  $A - (A \cap B) \geq 0$

An even more compelling reason is that the implication in expletive constructions like (14a) that  $A - (A \cap B)$  is empty can be cancelled when the context provides sufficient evidence that set  $A$  is not exhausted by the intersection  $A \cap B$ . Consider for example the small discourse chunk in (17). Since the context leaves no doubt that many students were involved in the protest action, neither (17b) nor (17b') implies that the two students who were arrested exhaust the complete set of demonstrating students.

- (17) a. Er was gisteren een grote demonstratie op de universiteit.  
           there was yesterday a big protest action at the university  
           ‘There was a big protest action at the university yesterday.’  
       b. Er werden twee studenten gearresteerd.  
           there were two students arrested  
           ‘Two students were arrested.’  
       b'. Twee studenten werden gearresteerd.  
           two students were arrested

Normally, and also in this work, the difference between (14a) and (16a) is discussed in terms of the PURELY QUANTIFICATIONAL versus the PARTITIVE reading of indefinite noun phrases: the former is supposed to only express the quantificational meaning of the cardinal numeral, whereas the latter expresses in addition that we are only dealing with a subpart of the denotation set of the NP. In the latter case, the noun phrase *twee studenten* ‘two students’ is treated as essentially synonymous with the true partitive construction in (18a) where the partitive *van*-PP explicitly refers to the superset from which the entities referred to by the complete noun phrase are taken; see 4.1.1.6 for further discussion of this construction.

- (18) Twee van de studenten werden gearresteerd.  
two of the students were arrested

The data in (17b&b') show, however, that this one-to-one correspondence cannot be maintained. This does not mean that we cannot make a distinction between purely quantificational and partitive indefinite noun phrases, but that we must keep in mind that the distinction is probably not syntactic in nature, but rather forced upon us by the context in which the indefinite noun phrase is used. For the moment, we may therefore simply conclude that the meaning expressed by the numeral is restricted to indicating the cardinality of the intersection  $A \cap B$  in Figure 1.

### 6.1.1.3. Noun phrases containing a cardinal numeral

This section discusses noun phrases containing a cardinal numeral. Section 6.1.1.3.1 starts with a discussion of the properties of the head noun. This is followed in 6.1.1.3.2 by a brief discussion of determiners in noun phrases containing a cardinal numeral. Section 6.1.1.3.3 concludes with a discussion of the position of the cardinal numerals within the noun phrase.

#### 6.1.1.3.1. The head noun

The examples in (19) show that the cardinal numerals, with the exception of *één* 'one', are normally followed by a plural count noun. There are, however, many exceptions to this general rule, which we will discuss in the remainder of this section.

- |         |                          |    |                                    |
|---------|--------------------------|----|------------------------------------|
| (19) a. | <i>één</i> boek/*boeken  | c. | <i>honderd</i> boeken/*boek        |
|         | one book/books           |    | a.hundred books/book               |
| b.      | <i>twee</i> boeken/*boek | d. | <i>honderd en één</i> boeken/*boek |
|         | two books/book           |    | hundred and one books/book         |

### 1. Substance nouns

The primeless cases in (20) show that substance nouns may follow a numeral when they refer to conventional units of the substance denoted by the noun. One might wish to explore the possibility that these noun phrases are actually binominal constructions involving an empty noun corresponding to the container noun in the primed examples; cf. the discussion of example (60) in 1.2.2.1.3.

- |         |                                   |     |                                    |
|---------|-----------------------------------|-----|------------------------------------|
| (20) a. | <i>drie</i> koffie                | a'. | <i>drie</i> koppen koffie          |
|         | three coffee                      |     | three cups [of] coffee             |
|         | 'three, e.g., cups of coffee.'    |     | 'three cups of coffee'             |
| b.      | <i>twee</i> suiker                | b'. | <i>twee</i> klontjes/pakken suiker |
|         | two sugar                         |     | two lumps/packs [of] sugar         |
|         | 'two, e.g., packs/lumps of sugar' |     | 'two packs/lumps of sugar'         |

There is, however, a conspicuous difference between the primeless and primed examples, which suggests that a binominal analysis of the primeless examples in (20) is not feasible; the examples in (21) show that the two nominal constructions differ in number, the noun phrase *drie koffie* triggers singular agreement on the finite verb in (21a), whereas the binominal construction *drie koppen koffie* triggers

plural agreement. Note further that the examples in (21) show that it is the number of the head noun that determines subject-verb agreement, and not the numeral.

- (21) a. Er staat/\*staan drie koffie op de tafel.  
           there stands/stand three coffee on the table  
       b. Er staan/\*staat drie koppen koffie op de tafel.  
           there stand/stands three cups [of] coffee on the table

## II. Measure nouns

Another exception to the general pattern is that nouns referring to conventional measure units may appear in their singular form. The following three subsections discuss three different subcases.

### A. Measure nouns in binominal construction.

A first group of measure nouns are those that may appear in a binominal construction. Example (22) shows that these nouns often have the option of appearing either in the singular or in the plural form; cf. Section 4.1.1 for additional discussion. The difference between the primeless and primed examples is that in the former, the speaker is referring to a total amount of three meters/liters/kilos of the substance denoted by the second noun, whereas in the latter case the speaker is referring to three units of the substance denoted by the second noun of one meter/liter/kilo each.

- |         |                  |        |     |                   |        |
|---------|------------------|--------|-----|-------------------|--------|
| (22) a. | drie meter       | draad  | a'. | drie meters       | draad  |
|         | three meter [of] | thread |     | three meters [of] | thread |
| b.      | drie liter       | wijn   | b'. | drie liters       | wijn   |
|         | three liter [of] | wine   |     | three liters [of] | wine   |
| c.      | drie kilo        | suiker | c'. | drie kilo's       | suiker |
|         | three kilo [of]  | sugar  |     | three kilos [of]  | sugar  |

When the noun following the numeral refers to a certain quantity itself, it is preferably singular. Examples involve nouns like *dozijn* 'dozen', *gros* 'gross', *miljoen* 'million', *miljard* 'billion', etc.; see Section 6.1.1.1 for the nominal status of the latter two forms.

- (23) a. twee dozijn/\*?dozijnen knikkers  
           two dozen/dozens [of] marbles  
       b. twee gros/\*grossen knikkers  
           two gross/grosses marbles  
       c. twee miljoen/\*miljoenen knikkers  
           two million/millions marbles

The examples in (24) show that in these cases also it is the number of the noun, and not the cardinal numeral, that triggers subject-verb agreement, which is of course related to the earlier observation that the speaker is referring to a total amount of three meters of thread in (24a), but to three threads of one meter each in (24b); cf. the discussion of (22).

- (24) a. Er ligt/\*liggen nog drie meter draad op de plank.  
           there lies/lie still three meter [of] thread on the shelf  
       b. Er liggen/\*ligt nog drie meters draad op de plank.  
           there lie/lies still three meters [of] thread on the shelf

*B. Measure nouns denoting time units*

The situation is somewhat more complex when the measure noun denotes a certain time interval. It seems a totally idiosyncratic matter whether a numeral can or cannot be followed by a singular noun: the nouns *seconde* ‘second’, *kwartier* ‘quarter of an hour’, *uur* ‘hour’ and *jaar* ‘year’ in (25) seems to prefer the singular form (which of course cannot be heard in the case of *seconde(n)* ‘second(s)’, where the plural *-n* is mute in spoken language). The plural forms are marginally acceptable when the temporal noun phrases refer to discrete entities, that is, discrete time units; cf. the discussion of (28) below.

- (25) a. Je moet de staaf vier seconde/<sup>2</sup>seconden in de vloeistof houden.  
           you must the bar four second/seconds in the liquid keep  
           ‘You must keep the bar in the liquid for four seconds.’  
       b. Ik zit al drie kwartier/<sup>3</sup>kwartieren op je te wachten.  
           I sit already three quarter/quarters for you to wait  
           ‘I have already been waiting for you for three quarters of an hour.’  
       c. Ik zit al drie uur/<sup>4</sup>uren op je te wachten.  
           I sit already three hour/hours for you to wait  
           ‘I have already been waiting for you for three hours.’  
       d. Ik ben drie jaar/<sup>5</sup>jaren weg geweest.  
           I am three year/years away been

The nouns *minuut* ‘minute’, *dag* ‘day’, *week* ‘week’ in (26), on the other hand, clearly prefer the plural form, the singular forms yielding questionable results at best. For many speakers the same thing holds for the noun *maand* ‘month’, although there are varieties of Dutch that also accept the singular form.

- (26) a. Ik heb het ei vier minuten/\*minuut gekookt.  
           I have the egg four minutes/minute boiled  
           ‘I have boiled the egg for four minutes.’  
       b. Ik ben drie dagen/\*dag weg geweest.  
           I am three days/day away been  
           ‘I’ve been away for three days.’  
       c. Ik ben drie weken/\*week weg geweest.  
           I am three weeks/week away been  
       d. Ik ben drie maanden/<sup>6</sup>maand weg geweest.  
           I am three months/month away been

A remarkable property of the temporal noun phrases in (25) and (26) is that they *always* trigger singular agreement on the verb when they are used as a subject of a copular construction (which suggests that we are dealing with °second order predication). So, both (27a) with the singular noun *kwartier* ‘quarter’ and (27b) with the plural noun *weken* ‘weeks’ trigger singular agreement on the verb *zijn* ‘to be’.

This remarkable fact can possibly be accounted for by appealing to the fact that the noun phrases refer to a singular time interval.

- (27) a. Drie kwartier is/\*zijn wel erg lang voor een lezing.  
           three quarter is/are PRT. very long for a talk  
       b. Drie weken is/\*zijn wel erg lang voor een vakantie.  
           three weeks is/are PRT. very long for a holiday

Note that the nouns in (25) can also appear in their plural form when the noun is modified by means of an attributive adjective. In these cases the noun phrases no longer refer to a continuous time interval; as with the nouns in the primed examples in (22), the temporal noun phrases seem to refer to discrete entities, that is, discrete time units. This also accounts for the fact that these noun phrases trigger plural agreement on the finite verb, as is shown in (28c).

- (28) a. de drie beslissende seconden/\*seconde  
           the three decisive seconds/second  
       b. de drie langste uren/\*uur van mijn leven  
           the three longest hours/hour of my life  
       c. de drie gelukkigste jaren/\*jaar van mijn leven zijn/\*is voorbij  
           the three happiest years/year of my life are/is past

Example (29a) shows that a numeral can also be followed by the singular noun *uur* in noun phrases that refer to certain times of the day. A similar function is performed by proper nouns referring to certain months in noun phrases that specify certain days of the year; note that (29b) alternates with the construction in (29b') which involves an ordinal numeral.

- (29) a. zes uur  
           six o'clock  
       b. elf september 1973  
           eleven September 1973  
       b'. de elfde september van het jaar 1973  
           the eleventh September of the year 1973

### *C. Measure nouns denoting monetary units*

When the noun refers to a certain monetary unit, like the dollar or the euro, the noun is normally singular. The same thing holds for the noun *cent*, which refers to the smaller unit in which prices are expressed; cf. *dit boek kost vierentwintig euro en veertig cent* 'This book costs twenty four euros and forty cents'. Examples are given in (30).

- (30) a. Dit boek kost twintig euro/\*euro's.  
           this book costs twenty euro/euros  
       b. Deze pen kost vijftig cent/\*centen.  
           this pen costs fifty cent/cents

Nouns referring to certain coins or bank notes, on the other hand, are normally in the plural. Examples of these nouns are given in (31). Note that *knaak* in (31b)

refers to coin that was in use when the guilder was still the monetary unit in the Netherlands; it seems that there are still no well-established names for the coins that are currently in use, apart, of course, from *euro* and *cent*.

- (31) a. Dit boek kost twee tientjes/\*tientje.  
           this book costs two tenners/tenner  
       b. Deze pen kost twee knaken/<sup>73</sup>knaak.  
           this pen costs two quarters/quarter

The fact that the noun in (31a) is obligatorily plural is probably related to the fact that we are dealing with a noun derived from a numeral by means of a diminutive suffix, given that the examples in (32) show that the diminutive counterparts of the nouns in (30) also require the plural ending. Still, this cannot be the whole story given that the noun *knaak* in (31b) is not a diminutive form.

- (32) a. Dit boek kost twintig eurootjes/\*eurootje.  
           this book costs twenty euros/euro  
       b. Deze pen kost vijftig centjes/\*centje.  
           this pen costs fifty cents/cent

The plural forms of *euro* and *cent* can also be used provided that they refer to the actual coins. So whereas the noun phrase *twintig euro* in (33a) refers to a collection of banknotes and/or coins that make up a total amount of twenty euros, the noun phrase *twintig euro's* in (33b) refers to a set of one euro coins with the cardinality 20. The primed examples show that, again in these cases, it is the number on the noun, and not the cardinal numeral, that determines subject-verb agreement. This is illustrated in the primed examples.

- (33) a. Jan heeft nog twintig euro in zijn portemonnee.  
           Jan has still twenty euro in his wallet  
       a'. Er ligt/\*liggen twintig euro op tafel.  
           there lies/lie twenty euro on the table  
       b. Jan heeft nog twintig euro's in zijn portemonnee.  
           Jan has still twenty euros in his wallet  
       b'. Er liggen/\*ligt twintig euro's op tafel.  
           there lie/lies twenty euros on the table

### III. Other cases

In addition to the cases discussed above there are some more isolated cases in which the noun following the cardinal numeral is singular. Some examples are given in (34). Observe that (34b) shows that in this case the number on the noun also determines subject-verb agreement.

- (34) a. Ik heb dat boek drie keer/<sup>74</sup>keren gelezen.  
           I have that book three time/times read  
           'I have read that book three times.'  
       b. Vier man is genoeg om die tafel op te tillen.  
           four man is enough in.order.to that table prt. to lift  
           'Four persons suffice to lift that table.'

It seems that sequences consisting of a numeral and a singular noun are normally not preceded by a determiner, unless the noun phrase is modified and/or strongly °D-linked. Note that these cases differ from the ones in (34) in that they trigger plural agreement on the finite verb when the noun phrase functions as subject, as in the (b)-examples.

- (35) a. Pff, die drie keer dat hij drugs gebruikt heeft.  
           well, that three time that he drugs used has  
           ‘Phff, those three times that he has used drugs.’  
       a’. De drie keer dat ik daar geweest ben, was het erg stil.  
           the three time that I there been am, was it very quiet  
           ‘It was very quiet the three times that I have been there.’  
       b. Die vier man daar zijn genoeg om die tafel op te tillen.  
           those four man over there are enough in.order.to that table prt. to lift  
           ‘Those four persons suffice to lift that table.’  
       b’. De vier man, die de tafel op getild hadden, kregen een biertje.  
           the four man, who the table prt.-lifted had, received a beer  
           ‘The four men, who had lifted the table, were given a beer.’

#### 6.1.1.3.2. *The determiner*

There do not seem to be many special restrictions on the determiner preceding the cardinal numeral. As is shown in (36a-c), definite articles, demonstratives and possessive pronouns all give rise to an equally acceptable result. When the noun phrase is indefinite, as in (36d), we can perhaps postulate the empty indefinite article  $\emptyset$ , just as in the case of other plural indefinite noun phrases.

- (36) a. de vier boeken over taalkunde  
           the four books about linguistics  
       b. die vier boeken over taalkunde  
           those four books about linguistics  
       c. mijn vier boeken over taalkunde  
           my four books about linguistics  
       d.  $\emptyset$  vier boeken over taalkunde  
            $\emptyset$  four books about linguistics

The indefinite article *een* ‘a’ cannot be combined with a numeral, which is of course related to the fact that noun phrases containing this article are inherently singular: adding the numeral *één* ‘one’ is therefore redundant, and adding some other numeral leads to a contradiction. In the next section, we will see that the complex demonstrative *zo’n* ‘such a’, which is the result of contraction of *zo* and *een*, cannot be followed by a numeral either.

- (37) \*een één/vier boek over taalkunde  
       a one/four book about linguistics

Example (38a) shows that the cardinal numeral *één* ‘one’ is special in that it can never be preceded by the definite article *de/het*, or a demonstrative or possessive pronoun. It is, however, generally assumed that the numeral *één* may appear after a

demonstrative pronoun when it is inflected; example (38b), taken from Haeseryn et al. (1997), clearly seems to demonstrate this. It must be noted, however, that inflected *ene* also appears in other environments with a more deictic meaning, in which case it is in opposition to *andere* 'other'. The examples in (38c) illustrate this. It might therefore be premature to decide on the basis of meaning alone that *ene* is a cardinal numeral in (38b). Before we can do that, we should first make a comparison of the two uses of *ene* in (38b) and (38c). We will leave this for future research.

- (38) a. \*het/dat/mijn één boek  
the/that/my one book  
b. Zelfs dat ene boek vond hij al te veel.  
even that one book considered he already too much  
'He already considered that one book too much.'  
c. Het/dat/mijn ene boek vond hij erg goed, het/dat/mijn andere niet.  
the/that/my one book considered he very good the/that/my other not  
'Of the/those/my (two) books he considered one very good, but the other not.'

#### 6.1.1.3.3. The position of the cardinal numeral within the noun phrase

As we discussed in the introduction to this chapter, numerals (and quantifiers) can be assumed to be generated in the position NUM in the structure in (39a). This predicts that numerals generally follow the determiners and precede those elements that are part of the NP-domain, that is, the head noun itself and the attributive modifiers, as in (39b). These predictions seem to be borne out; example (39c) shows that the numeral cannot precede the definite article, and example (39d) that it must precede the attributive modifiers of the head noun.

- (39) a. [<sub>DP</sub> D [<sub>NUMP</sub> NUM [<sub>NP</sub> ... N ...]]]  
b. de acht gele rozen  
the eight yellow roses  
c. \*acht de gele rozen  
d. \*de gele acht rozen

More must be said about the order in (39d), however, since the result is acceptable when the attributive adjective is assigned contrastive accent, as in (40a). This is possible when domain D contains various bouquets, consisting of eight roses each: (40a) can then be used to distinguish the yellow bouquet from the bouquets containing roses of another color. The fact that this order of the numeral and the attributive modifier requires that the roses be part of domain D correctly predicts that this order cannot be found in indefinite noun phrases like (40a'). In (40b&b'), we give some comparable examples taken from the literature: again, the marked order requires the referents of the noun phrase to be part of domain D, so that the indefinite noun phrase in (40b') yields an infelicitous result.

- (40) a. de GELE acht rozen                      b. die LEUKE vier dochters van hem  
the yellow eight roses                      those nice four daughters of his  
a'. \*Ø GELE acht rozen                      b'. \*Ø LEUKE vier dochters van hem



The ungrammatical example in (39c) cannot be saved by assigning it a special intonation pattern: cardinal numerals never precede the definite article. The same thing holds for the D-linked demonstrative and possessive pronouns in (41). Note in passing that the primed examples are acceptable when the numeral is preceded by *alle* 'all'; this will be discussed in Section 7.1.2.2.

- (41) a. die boeken                      b. zijn vier dochters  
       those three books                his four daughters  
       a'. \*drie die boeken            b'. \*vier zijn dochters

Haeseryn et al. (1997) have claimed that the non-D-linked demonstrative pronouns *zo'n* and *zulke* behave differently. The primeless examples in (42) show that these demonstratives cannot be followed by a numeral: for (42a), this does not come as a big surprise, of course, since we saw in (37) above that the article *een* 'a', which acts here as part of the complex determiner *zo'n* 'such a', cannot be combined with a cardinal numeral either; for (42b), on the other hand, no such explanation seems available. The data become even more mysterious when we consider the primed examples, which are certainly better than the primeless ones. Although some speakers of Dutch reject examples like (42b'), the fact that these examples are considered fully acceptable by at least some speakers pose a problem for the assumption that the non-D-linked demonstratives are situated in the D-position of (39a), and suggest that they are actually lower in the nominal projection than the cardinal numerals.

- (42) a. \*zo'n één boek                      a'. Eén zo'n boek    maakt alles        goed.  
       such a one book                      one such a book makes everything well  
       'One book like that makes everything well.'  
       b. \*zulke drie boeken                b'. %drie zulke boeken maken alles        goed  
       such three books                      three such a book makes everything well  
       'Three book like that makes everything well.'

#### 6.1.1.4. Modification

This section will show that it is possible to modify the cardinal numerals, and discusses some of the means that can be used.

##### 1. Adverbial approximative modifiers

Cardinal numerals can be readily modified by two types of adverbial phrases: those of the first type are approximative modifiers, which indicate that the cardinality expressed by the numeral is approximately correct, and those of the second type indicate that the cardinality is precise. Examples of the former are *bijna* 'nearly', *circa* 'about', *ongeveer* 'approximately', *ruim* 'over', and *zowat* 'about'; examples of the latter are *precies* 'exactly' and *exact* 'exactly'.

- (43) a. Jan bijna/ongeveer/ruim duizend boeken.  
       Jan has nearly/about/over thousand books  
       'Jan has nearly/about/over a thousand books.'  
       b. Jan heeft precies/exact duizend boeken.  
       Jan has exactly/exactly thousand books  
       'Jan has exactly a thousand books.'

Normally, approximate modifiers are only used with fairly round figures. Without further context, it would sound weird to say something like (44a), since using the numeral *negenhonderd en zevenennegentig* (997) suggests that the speaker is able to give the precise number of books involved so that the modifier is superfluous; examples like (44a) are only felicitous when it is known from the context that, for some reason, Jan aims at collecting precisely 997 books. This restriction does not hold, however, in cases like (44b), where the noun can also be preceded by fractions. So *bijna negenhonderd en zevenennegentig euro* ‘nearly nine hundred and ninety seven euro’ could refer to, e.g., an amount of €96.89.

- (44) a. <sup>s</sup>Jan heeft bijna/ongeveer/ruim negenhonderd en zevenennegentig boeken.  
           Jan has    nearly/about/over    nine hundred and ninety seven    books  
       b. Jan heeft bijna/ongeveer/ruim negenhonderd en zevenennegentig euro.  
           Jan has    nearly/about/over    nine hundred and ninety seven    euro

## II. Approximative constructions introduced by the spurious article *een*

The use of approximative adverbial phrases is not the only way to express the notion of approximation. Dutch has available an ample variety of means to express this notion. The examples in (45), for example, show that there is a small set of adjectives that can have this function; like the approximative adverbs, they precede the numeral they modify.

- (45) a. een kleine honderd boeken  
           a    small    hundred books  
           ‘slightly less than a hundred books’  
       b. een dikke/goede honderd boeken  
           a    fat/good    hundred books  
           ‘somewhat more than a hundred books’

The examples in (45) seem related to (46a) where no adjective is used and a “spurious” indefinite article expresses the meaning “approximately” all by itself; the adjectives in (45) can probably be seen as modifiers that make the approximative reading in (46a) more specific. Although some examples can be found on the internet, it seems to us that the adjectives in (45) cannot readily be added to example (46b), where the indefinite article is replaced by the spurious non-D-linked demonstrative *zo’n*: <sup>%</sup>*zo’n kleine/dikke honderd boeken*. Note further that the approximative reading of *een* and *zo’n* can be enhanced by using a juxtaposition of two numerals, as in the primed examples.

- |                            |                           |
|----------------------------|---------------------------|
| (46) a. een honderd boeken | a'. een zes, zeven euro   |
| a    hundred books         | a    six    seven euro    |
| ‘about a hundred books’    | ‘about six or seven euro’ |
| b. zo’n honderd boeken     | b'. zo’n zes, zeven euro  |
| such.a hundred books       | such.a six    seven euro  |
| ‘about a hundred books’    | ‘about six or seven euro’ |

The suggestion that the adjectives in (45) modify the meaning expressed by the spurious indefinite article can be further supported by the fact, shown in (47), that

the indefinite article cannot be replaced by a definite one, which suggest that the adjectives do not express an approximative meaning all by themselves.

- (47) a. \*de kleine honderd boeken  
           the small hundred books  
       b. \*de dikke/goede honderd boeken  
           the fat/good hundred books

However, Haeseryn et al. (1997) note that the adjectives *dik* and *goed* in (45b) are also used without the article *een* in spoken language. Although examples like (48a) sound marked to us, especially with *goed*, they can readily be found on the internet. We must therefore conclude that, at least for speakers who accept and produce these examples, these adjectives do express an approximative meaning all by themselves. This does not hold for *klein*, however; (48b) is certainly not acceptable.

- (48) a. %dik/goed honderd boeken  
       b. \*klein honderd boeken

The constructions in (46) seem to alternate with the constructions in (49), where the numeral is expressed in a postnominal *of*-phrase. It is not clear to what word class *of* belongs; normally, *of* is used as a conjunction or as an interrogative complementizer, but neither of these functions seems appropriate for characterizing it in these examples. Note further that it is not possible in constructions like these to add an approximative modifier, but the approximative reading can be enhanced by using numerals in juxtaposition.

- |                             |                             |
|-----------------------------|-----------------------------|
| (49) a. een boek of honderd | a'. een euro of zes, zeven  |
| a book OF hundred           | an euro OF six seven        |
| 'about a hundred books'     | 'about six or seven euros'  |
| b. zo'n boek of honderd     | b'. zo'n euro of zes, zeven |
| such.a book OF hundred      | such.a euro OF six seven    |
| 'about a hundred books'     | 'about six or seven euros'  |

Example (50a) is yet another way of expressing the same meaning. The noun phrase *een stuk of honderd* in this construction seems to have more or less the same structure as the phrase in (49a) and functions as a complex numeral modifying the noun *boeken*. According to our own intuition, *zo'n* is impossible in this construction, although examples like (50b) can be found on the internet (although *een stuk of* occurs about 700 times as often as *zo'n stuk of*); we therefore marked it with “%”.

- |                                        |                                 |
|----------------------------------------|---------------------------------|
| (50) a. [[een stuk of honderd] boeken] | b. %zo'n stuk of honderd boeken |
| a piece OF hundred books               | such.a piece OF hundred books   |
| 'about a hundred books'                | 'about a hundred books'         |

Despite the fact that the examples in (49a) and (50a) express more or less the same meaning, they exhibit rather different syntactic behavior. The first difference involves subject-verb agreement. Since the noun preceding the numeral in (49) is singular, it need not surprise us that this noun phrase triggers singular agreement on the verb in (51a), although plural agreement seems possible for some speakers.

Example (51b), on the other hand, shows that this is different with the noun phrase in (50a); the finite verb does not agree with the singular noun *stuk*, but with the plural noun *boeken*, a phenomenon that is common in several types of binominal constructions; cf. Section 4.1.1.

- (51) a. Er staat/<sup>%</sup>staan een boek of honderd in de kast.  
           there stands/stand a book OF hundred in the bookcase  
       b. Er staan/<sup>\*?</sup>staat een stuk of honderd boeken in de kast.  
           there stand/stands a piece OF hundred books in the bookcase

The second difference concerns modification of the noun. The examples in (52) show that the noun *boek* can be modified when it is part of the structure in (50a), but not when it is part of the structure in (49a).

- (52) a. een (\*interessant) boek of honderd  
           an interesting book OF hundred  
       b. een stuk of honderd interessante boeken  
           a piece OF hundred interesting books

The third difference is illustrated in (53) and concerns the fact that the numeral can be replaced by the modifier *wat* ‘some’ in (50a), whereas this is impossible in (49a).

- (53) a. \*een boek of wat  
           a book OF some  
       b. een stuk of wat boeken  
           a piece OF some books  
           ‘some books’

### III. Approximative constructions introduced by a spurious preposition

A totally different way of expressing an approximative meaning is by using a PP headed by, e.g., the prepositions *rond*, *tegen* or *over* (other prepositions are also possible; cf. Section 5.1.4.3, sub II), which must be followed by the definite article *de*. Both the preposition and the definite article are spurious given that the PP behaves like an indefinite noun phrase, which is clear from the fact, illustrated in (54), that the “PP” may function as a subject (it triggers agreement on the finite verb) in an expletive construction.

- (54) a. Er staat rond de duizend euro op mijn spaarrekening.  
           there stands around the thousand euro on my savings account  
           ‘There is about a thousand euro on my savings account.’  
       b. Er zitten/\*zit tegen de duizend leerlingen op deze school.  
           there sit/sits against the thousand pupils at this school  
           ‘There are nearly one thousand students at this school.’

### IV. Modifiers indicating an upper or lower bound

So far, most of the modification constructions express an approximative meaning. There are, however, other modifiers which convey that the cardinality expressed by the numeral is an upper or a lower bound. Modifiers that indicate that the cardinality

expressed by the numeral is an upper bound are given in (55a), and modifiers that indicate a lower bound in (55b).

- (55) a. hoogstens/ten hoogste/hooguit/maximaal veertig boeken  
at.most forty books  
'at most forty books'
- b. minstens/tenminste/minimaal/zeker veertig boeken  
at.least forty books  
'at least forty books'

Similar meanings can be expressed by means of the comparative phrases *meer/minder dan* + NP ‘more/less than + NP’ in (56a). This example raises the question whether the quantifier *meer* modifies the numeral or whether it is the numeral that modifies *meer*. The latter analysis can be supported by claiming that a comparative is normally modified by means of a *dan*-phrase. However, this particular use of the *dan*-phrase, shown in (56a), would be special in that it must precede the modified noun, and cannot follow it. As illustrated in (56b), *dan*-phrases used as modifiers of comparatives do not normally precede the modified noun. This fact may be given in support of the former analysis, according to which it is the comparative that modifies the numeral; see (179) in Section 6.2.5 for similar constructions with degree quantifiers.

- (56) a. Zij heeft meer/minder <dan veertig> boeken <\*dan veertig>.  
 she has more/less than forty books  
 b. Zijn heeft meer/minder <\*dan Jan> boeken <dan Jan>.  
 she has more/less than Jan books

## V. Some problematic cases

Some disputable cases of modification of the numeral are given in (57). One possibility is to assume that the postnominal phrase is a modifier of the prenominal numeral.

- (57) a. Jan kreeg drie boeken meer/minder dan Peter.  
 Jan received three books more/less than Peter  
 b. Jan kreeg drie boeken te veel/weinig.  
 Jan received three books too many/few  
 c. Jan kreeg drie boeken extra.  
 Jan received three books extra

Alternatively, one might argue that the noun phrase consisting of the numeral and the noun acts as a modifier of the postnominal phrase, that is, by assuming that the function of the noun phrase *drie boeken* is similar to that of the measure phrase *drie centimeter* in examples like *het zwembad is drie centimeter te lang* ‘the swimming pool is three centimeters too long’, where the noun phrase clearly modifies the AP (cf. Section A3.1.4.2). A characteristic of these nominal measure phrases is that they can be separated from the phrase they modify by means of *wh*-movement: *Hoeveel centimeter<sub>i</sub> is het zwembad [AP t<sub>i</sub> te lang]*? ‘How many centimeters is the swimming pool too long?’ Since the noun phrases in (57) exhibit the same property, it seems plausible that they, too, act as modifiers.

- (58) a. Hoeveel boeken<sub>i</sub> kreeg Jan [<sub>AP</sub> *t<sub>i</sub>* meer/minder dan Peter].  
           how.many books received Jan more/less than Peter  
       b. Hoeveel boeken<sub>i</sub> kreeg Jan [<sub>AP</sub> *t<sub>i</sub>* te veel/weinig].  
           how.many books received Jan too many/few  
       c. Hoeveel boeken<sub>i</sub> kreeg Jan [<sub>AP</sub> *t<sub>i</sub>* extra].  
           how.many books received Jan extra

Note that the noun phrase *drie boeken* can be omitted in the examples in (57a&b), which seems to support the analysis suggested in (58). The fact that this is not readily possible in example (57c), however, constitutes a potential problem for the suggested analysis.

#### 6.1.1.5. Special cases

In the sections above we focused on cardinal numerals in prenominal position. Although this is indeed the core use of the numerals, they can also be used in a variety of other constructions. Although we will not treat them extensively here, we at least want to briefly mention these cases before concluding this section. A first case worthy of mention involves numerals that are premodified by the quantifier *alle* ‘all’. In such cases the numeral does not follow the definite determiner, as is usually the case, but precedes it. These cases are more extensively discussed in Section 7.1.2.2.

- (59) a. <alle vier> de <\*alle vier> jongens  
           all four the boys  
       b. <alle vier> die <\*alle vier> boeken  
           all four those books  
       c. <alle vier> mijn <\*alle vier> broers  
           all four my brothers

Cardinal numerals expressing a cardinality larger than 1 can also occur as the °complement of the preposition *per*: in cases like these the numeral is in a paradigm with bare nouns like *stuk* ‘piece’ and *paar* ‘pair’; cf. Section 4.1.1.3.3, sub III.

- (60) Die batterijen worden alleen per stuk/paar/twee/vier verkocht.  
       those batteries are only per piece/pair/two/four sold  
       ‘Those batteries are only sold by the piece/in pairs/in lots of four.’

Cardinal numerals can occasionally be used as postmodifiers of [+HUMAN] plural personal pronouns, in which case they indicate the cardinality of the group referred to, as in (61a). In this position, it is common to add the suffix *-en* to the numeral (which some speakers actually seem to prefer). This use of the numeral is in various respects similar to that of *allen* and *beiden* in (61b), which is more extensively discussed in Section 7.1.2.2.2, sub IID.

- (61) a. Ik heb jullie drie/drieën gisteren gemist.  
           I have you three/three yesterday missed  
       b. Ik heb jullie allen/beiden gisteren gemist.  
           I have you all/both yesterday missed

The form derived by means of *-en* is also used in constructions like (62a), which are more extensively discussed in Section 5.2.2.5.3. An alternative way of expressing the same meaning is by adding the diminutive suffix *-tje* to the numeral, in which case the resulting form clearly functions as a noun, witness the obligatory presence of the plural affix *-s*. Example (62c) shows that the diminutive suffix can also be used with the numeral *één* ‘one’, although in this case the preposition *in* is used, not the preposition *met* (some speakers also allow *op* in this context).

- (62) a. We komen met zijn/ons drieën/vieren.  
           we come with ZIJN/our three-EN/four-EN  
           ‘We will be/come with four.’  
       b. We komen met zijn/ons drietjes/viertjes.  
           we come with ZIJN/our three-TJES/four-TJES  
           ‘We will be/come with three/four.’  
       c. Ik kom in mijn eentje.  
           I come in my one-TJE  
           ‘I will come alone.’

Note, finally, that the constructions in (62a&b) also occur with quantifiers like *allen* and *beiden* (or diminutive *beidjes*); this is shown in (63).

- (63) a. Wij/jullie/zij doen het met z’n allen/beiden/beidjes.  
           we/you<sub>pl</sub>/they do it with his all/both/both<sub>dim</sub>  
           ‘We/you/they do it all/both together.’  
       b. Wij doen het met ons allen/beiden/beidjes.  
           we do it with our all/both/both<sub>dim</sub>  
           ‘We do it all/both together.’

For more discussion of examples like (61) to (63), including their diachronic development, we refer to Booij (2010: section 9.5) and the references cited there.

### 6.1.2. Ordinal numerals

This section discusses the ordinal numerals. Section 6.1.2.1 starts by discussing the form of the ordinal numerals, and 6.1.2.2 continues with a discussion of their semantics. Section 6.1.2.3 concludes the discussion by showing that cardinal numerals need not be placed in the NUM position, but may also occur in some position following the attributive adjectives.

#### 6.1.2.1. Simple and compound forms

The ordinal numerals are derived from the cardinal ones by means of affixation with *-de* or *-ste*. The former suffix is more or less restricted to the ordinals derived from the cardinal numerals corresponding to 0 to 19, with the exception of the irregular form *eerste* ‘first’ and the form *achtste* ‘eighth’. Note that the ordinal numeral *derde* ‘third’ is not derived from the cardinal numeral *drie* but features the morpheme *der-*, which also appears in *dertien* (13) and *dertig* (30). The ordinal numeral *vierde*, on the other hand, is derived from *vier* (4), not from the irregular morpheme *veer-*, which is used in *veertien* (14) and *veertig* (40).

(64) The ordinal numerals 1<sup>st</sup> to 19<sup>th</sup>

|                 |                |                  |             |
|-----------------|----------------|------------------|-------------|
| 0               | ?nulde         | 10 <sup>th</sup> | tiende      |
| 1 <sup>st</sup> | <i>eerste</i>  | 11 <sup>th</sup> | elfde       |
| 2 <sup>nd</sup> | tweede         | 12 <sup>th</sup> | twaaifde    |
| 3 <sup>rd</sup> | <i>derde</i>   | 13 <sup>th</sup> | dertiende   |
| 4 <sup>th</sup> | vierde         | 14 <sup>th</sup> | veertiende  |
| 5 <sup>th</sup> | vijfde         | 15 <sup>th</sup> | vijftiende  |
| 6 <sup>th</sup> | zesde          | 16 <sup>th</sup> | zestiende   |
| 7 <sup>th</sup> | zevende        | 17 <sup>th</sup> | zeventiende |
| 8 <sup>th</sup> | <i>achtste</i> | 18 <sup>th</sup> | achttiende  |
| 9 <sup>th</sup> | negende        | 19 <sup>th</sup> | negentiende |

Higher numerals may also end in *-de* provided they are complex forms ending in one of the numerals in (64) taking this suffix. Two examples are given in (65).

- (65) a. honderd en zesde  
hundred and sixth  
b. driehonderd (en) vijftiende  
three.hundred and fifteenth

In all other cases, the ordinal is derived from the cardinal numeral by means of affixation with *-ste*. We illustrate this for some round figures in Example (66). The fact that *biljoenste* sounds somewhat weird probably reflects the fact that the use of that high an ordinal numeral is uncommon.

(66) Other ordinal numerals

|                  |             |                                 |             |
|------------------|-------------|---------------------------------|-------------|
| 20 <sup>th</sup> | twintigste  | 100 <sup>th</sup>               | honderdste  |
| 30 <sup>th</sup> | dertigste   | 1000 <sup>th</sup>              | duizendste  |
| 40 <sup>th</sup> | veertigste  | 1,000,000 <sup>th</sup>         | miljoenste  |
| 50 <sup>th</sup> | vijftigste  | 1,000,000,000 <sup>th</sup>     | miljardste  |
| 60 <sup>th</sup> | zestigste   | 1,000,000,000,000 <sup>th</sup> | ?biljoenste |
| 70 <sup>th</sup> | zeventigste |                                 |             |
| 80 <sup>th</sup> | tachtigste  |                                 |             |
| 90 <sup>th</sup> | negentigste |                                 |             |

The formations in (67) are often also considered ordinal numerals; the form in (67d) is the interrogative form of the ordinal numeral, derived from *hoeveel* ‘how many’.

- (67) a. *laatste* ‘last’  
b. *voorlaatste* ‘penultimate’  
c. *middelste* ‘middle’  
d. *hoeveelste* ‘what number in the ranking’

### 6.1.2.2. Semantics

This section discusses the semantics of the ordinal numerals. When an ordinal number is used in prenominal position the noun phrase normally refers to an entity



in an array, that is, an ordered set of entities. When the ordinal numeral is preceded by a cardinal one, the phrase functions as a fraction.

#### 6.1.2.2.1. *Use as pronominal modifiers*

Ordinal numerals can only be used as pronominal modifiers when we are dealing with an ordered set of entities, and the numeral is used in order to identify the intended referent from that set. Since the set is normally part of domain D, it does not come as a surprise that in the majority of cases the ordinal numeral requires a definite determiner to be present.

- (68) a. Zijn eerste boek ging over het nomen.  
his first book was about the noun  
b. De vierde kandidaat kreeg de baan.  
the fourth candidate got the job

In many cases, it is implicitly clear what the principles underlying the ordering are; in the examples in (68), for example, the ordering seems temporal. When it is not unambiguously clear where the listener must start counting, this can be made explicit by means of a modifier. Typical examples of such modifiers are the *van*-PPs in (69).

- (69) a. het vierde boek van links/rechts  
the fourth book from left/right  
'the fourth book from the left/right'  
b. de derde plank van onder/boven  
the third shelf from below/above  
'the third shelf from below/the top'

Indefinite determiners are mainly restricted to cases where the speaker/writer is providing an enumeration, for example when he argues against or in favor of a certain hypothesis: in (70a), use of *een tweede probleem* 'a second problem' sounds completely natural. There are also some sporadic contexts in which no article is required to the left of the ordinal numeral. Examples like (70b) seem restricted to more or less "telegraphic" registers.

- (70) a. Er zijn verschillende problemen voor deze hypothese. Het eerste  
there are several problems for this hypothesis the first  
probleem betreft ..... Een tweede probleem heeft te maken met .....  
problem concerns A second problem has to do with  
b. Vierde punt op de agenda is de opvolging van onze voorzitter.  
fourth item on the agenda is the succession of our chairman

Ordinal numerals are also used in several more or less "fixed" expressions like those shown in (71). In these cases, the ordinal numeral and the noun constitute a lexical unit, which is also clear from the fact that the noun can be plural; nouns following an ordinal numeral are normally singular: *het tweede boek*/\**boeken* 'the second book'/\*'books'.

- (71) a. de [<sub>N</sub> eerste ministers] van Nederland en Engeland  
the prime ministers of the Netherlands and Britain  
b. [<sub>N</sub> Eerste/Oudste kinderen] zijn meestal verwend.  
first/oldest children are generally spoiled  
c. Er werden dit jaar twee [<sub>N</sub> tweede prijzen] uitgereikt.  
the were this year two second prizes prt.-issued  
'This year, two second prizes were issued.'

#### 6.1.2.2.2. Use in fractions

Fractions are normally derived from ordinal numerals, in which cases the ordinals are preceded by a cardinal numeral, as is shown in the primeless examples in (72). In these cases the ordinal numeral does not, of course, help to pick out a referent from an ordered set, but functions as the denominator of the fraction. The denominator of  $\frac{1}{2}$  and  $\frac{3}{4}$  need not be expressed by the ordinal numerals *tweede* and *vierde* but can also be the forms *half* 'half' and *kwart* 'quarter', as in the primed examples.

- |         |                              |                |
|---------|------------------------------|----------------|
| (72) a. | één tweede (1/2)             | a'. een half   |
|         | one second                   | a half         |
| b.      | drie vierde (3/4)            | b'. drie kwart |
|         | three fourth                 | three quarter  |
| c.      | vijf vierentachtigste (5/84) |                |
|         | five eighty-fourth           |                |

Actually, the forms in the primed examples are much preferred in colloquial speech over the primeless regular forms. For example, it would normally be considered odd to use *een tweede* or *een vierde* in (73a&b) to refer 500 or 250 cc of wine. Especially with *tweede*, but also with *vierde*, it is rather the reading “a second/fourth liter of wine” that is prominent in these examples. In (73c), on the other hand, the prominent interpretation is 125 cc of wine.

- (73) a. Voeg een halve/<sup>#</sup>tweede liter wijn bij de vruchten.  
add a half liter [of] wine to the fruits  
b. Voeg een kwart/<sup>#</sup>vierde liter wijn bij de vruchten.  
add a quarter liter [of] wine to the fruits  
c. Voeg een achtste liter wijn bij de vruchten.  
add an eighth liter [of] wine to the fruits

For completeness' sake, note that *half* and *kwart* should probably not be considered ordinal numerals. Especially in the case of *half* this would be doubtful since this form exhibits adjectival inflection; when the modified noun is [-NEUTER], as in (74a), *half* is inflected with an attributive *-e* ending, which is lacking when the noun is [+NEUTER].

- (74) a. een halve/kwart cake  
a half/quarter cake<sub>[-neuter]</sub>  
b. een half/kwart brood  
a half/quarter bread<sub>[+neuter]</sub>

6.1.2.3. *The position of the ordinal numeral within the noun phrase*

Section 6.1.1.3 has shown that cardinal numerals are generated in the position NUM in (75a), which accounts for the fact that these numerals in (75b) follow the determiners but precede the nominal head and its attributive modifiers.

- (75) a. [DP D [NUMP NUM [NP ... N ...]]]  
       b. Hij bewonderde die drie fraaie bomen.  
           he admired those three fine trees

As is shown in the (a)-examples in (76) the ordinal numerals normally occupy this position as well. The noun phrase *de derde ongetekende cheque* can have two different meanings depending on the intonation; when it is pronounced as one intonational phrase, it is claimed that the check under discussion is the third unsigned one; when the ordinal numeral and adjective are separated by an intonation break, the check under discussion may be the only unsigned one (which happens to be unchecked). The two cases differ syntactically in that in the second case, the order of the attributive adjective and the ordinal numeral can be reversed. Example (76b), which can be pronounced either with or without an intonation break, is more or less synonymous with (76a'), but not with (76a).

- (76) a. Hij stuurde de derde ongetekende cheque terug.  
           he sent the third unsigned check back  
           'He sent back the third unsigned check.'  
       a'. Hij stuurde de derde, ongetekende cheque terug.  
           he sent the third, unsigned check back  
           'He sent back the third check, which was not signed.'  
       b. Hij stuurde de ongetekende (,) derde cheque terug.  
           he sent the unsigned third check back  
           'He sent back the third check, which was not signed.'

Normally speaking, the ordinal and cardinal numerals are in complementary distribution, which suggests that the two compete for the same position NUM in (75a). An exception must, of course, be made for those cases where the ordinal numeral and the noun constitute a lexical unit. In those cases, the lexicalized form can be preceded by a cardinal numeral, as in (77a). Another exception is given in (77b): in this example the two numerals seems to make up a complex modifier, which pick out the first/last two candidates in an ordered set. Example (77c) shows that the ordinal numeral in these complex modifiers is restricted to *eerste* and *laatste*; an ordinal like *derde* 'third' is excluded.

- (77) a. de twee [<sub>N</sub> eerste ministers]  
           the two prime ministers  
       b. de [<sub>NUM</sub> eerste/laatste twee] kandidaten  
           the first/last two candidates  
       c. \*de [<sub>NUM</sub> derde twee] kandidaten  
           the third two candidates

## 6.2. Quantifiers

This section discusses quantifiers like *alle/sommige/vele* ‘all/some/many’. We will begin in Section 6.2.1 with a discussion of some more general properties of, and notions related to these quantifiers. After that, Sections 6.2.2 to 6.2.4 will discuss the universal, existential and degree quantifiers in more detail.

### 6.2.1. Introduction

This section will discuss some more general semantic and syntactic properties of (noun phrases containing) quantifiers. We will start with a brief discussion of the core meaning of the quantifiers. This will be followed by a discussion of the distinction between what has become known in the literature as weak and strong quantifiers. After that we will briefly discuss the fact that quantifiers display different behavior with respect to the question of what kinds of inference are licensed by using certain quantifiers. We conclude with a brief discussion of the independent use of quantifiers, that is, their use as an argument or a floating quantifier.

#### 1. Core semantics

The easiest way to explain the core meaning of the quantifiers is by using Figure 1 from Section 1.1.2.2.1, repeated below, to represent the subject-predicate relation in a clause. In this figure, A represents the set denoted by the subject NP and B the set denoted by the verb phrase. The intersection  $A \cap B$  denotes the set of entities for which the proposition expressed by the clause is claimed to be true. In an example like *Jan wandelt op straat*, for example, it is claimed that the set denoted by A, viz. {Jan}, is properly included in set B, which is constituted by the people walking in the street. In other words, it expresses that  $A - (A \cap B) = \emptyset$ .

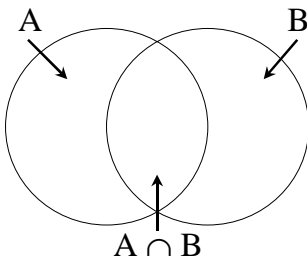


Figure 1: Set-theoretic representation of the subject-predicate relation

The quantifiers have a function similar to that of the cardinal numerals, namely, to indicate the size or the cardinality of intersection  $A \cap B$ . They differ from the cardinal numerals, however, in that they do not do this in a very precise manner. An existential quantifier like *sommige* or *enkele* ‘some’ in (78a), for example, simply indicates that  $A \cap B$  has a cardinality larger than 1. The degree quantifier *veel* ‘many’ in (78b) indicates that the cardinality of  $A \cap B$  is larger than a certain contextually defined norm  $n$ . And the universal quantifier *alle* ‘all’ in (78c) expresses that the intersection of A and B exhausts set A, that is, that  $A - (A \cap B) = \emptyset$ .

- (78) a. Sommige/Enkele deelnemers zijn al vertrokken.  
           some/some participants are already left  
           ‘Some participants have already left.’  
       a’. *sommige*:  $|A \cap B| > 1$   
       b. Veel deelnemers zijn al vertrokken.  
           many participants are already left  
           ‘Many participants have already left.’  
       b’. *veel*:  $|A \cap B| > n$   
       c. Alle deelnemers zijn al vertrokken.  
           all participants are already left  
           ‘All participants have already left.’  
       c’. *alle*:  $|A \cap B| > 1 \ \& \ A - (A \cap B) = \emptyset$

Since the quantifiers perform a similar function as the cardinal numbers without making the cardinality of  $A \cap B$  precise, some Dutch grammars refer to these quantifiers as “*indefinite* cardinal numerals”; other grammars, like Haeseryn et al. (1997) divide these quantifiers into “indefinite cardinal numerals” and “indefinite pronouns”.

## II. Strong and weak quantifiers

The examples in (78) are all “partitive” in the sense that set A is already part of domain D. Quantifiers can, however, also be used in presentational sentences, that is, to introduce new entities into domain D, although it is not the case that all quantifiers can be used in this way: the (a)-examples in (79) show, for example, that the existential quantifiers *enkele* and *sommige* differ in that only the former can be used in a presentational °expletive construction. This means that the difference between *sommige* and *enkele* is similar to that between the weak and the strong form of English *some*, which are given in the glosses and translations as *sm* and *some*, respectively. Like *enkele*, the degree quantifier *veel* ‘many’ can be used both in a partitive construction like (78b) and in a presentational expletive construction like (79b). As is shown in (79c), the universal quantifier *alle* ‘all’ cannot be used in presentational sentences. Because the properties of the quantifier in the partitive and presentational constructions correlate with, respectively, the weak and the strong forms of English *some*, they are often referred to as WEAK and STRONG QUANTIFIERS.

- (79) a. Er zijn al enkele deelnemers vertrokken.  
           there are already sm participants left  
           ‘Sm participants have already left.’  
       a’. \*Er zijn al sommige deelnemers vertrokken.  
           there are already some participants left  
           ‘Some participants have already left.’  
       b. Er zijn al veel deelnemers vertrokken.  
           there are already many participants left  
           ‘Many participants have already left.’  
       c. \*Er zijn al alle deelnemers vertrokken.  
           there are already all participants left

The examples in (79) show that noun phrases with weak and strong quantifiers behave like, respectively, indefinite and definite noun phrases. There is yet another way in which this correlation holds. First, consider the two (a)-examples of (80), which show that in noun phrases containing a cardinal numeral the head noun of the primeless example can be left implicit when so-called °quantitative *er* is present (provided, at least, that the content of the noun is recoverable from the discourse or the extra-linguistic context). The contrast between (80a') and (80b') shows, however, that this is only possible when the noun phrase is indefinite.

- (80) a. Jan heeft drie boeken meegenomen.  
 Jan has three books prt.-taken  
 'Jan has taken three books with him.'
- a'. Jan heeft er [<sub>DP</sub> drie [<sub>NP</sub> e]] meegenomen.  
 Jan has ER three prt.-taken
- b. Jan heeft de drie boeken meegenomen.  
 Jan has the three books prt.-taken  
 'Jan has taken three books with him.'
- b'. \*Jan heeft er [<sub>DP</sub> de drie [<sub>NP</sub> e]] meegenomen.  
 Jan has ER the three prt.-taken

The examples in (81) show that we find a similar contrast between noun phrases containing a weak quantifier and those containing a strong quantifier: leaving the head noun implicit is only possible in the former case.

- (81) a. Jan heeft er [<sub>DP</sub> enkele/\*sommige [<sub>NP</sub> e]] meegenomen.  
 Jan has ER sm/some prt.-taken  
 'Jan has already taken some of them (e.g., books) with him.'
- b. Jan heeft er [<sub>DP</sub> veel [<sub>NP</sub> e]] meegenomen.  
 Jan has ER many prt.-taken  
 'Jan has already taken many of them with him.'
- c. \*Jan heeft er [<sub>DP</sub> alle [<sub>NP</sub> e]] meegenomen.  
 Jan has ER all prt.-taken  
 'Jan has already taken all of them with him.'

### III. Logical properties of quantifiers: Valid inference patterns

Quantifiers may differ in the logical inferences that they license. High degree quantifiers like *veel* 'many', for example, allow the semantic implication in (82a), whereas low degree quantifiers like *weinig* 'few' do not allow this inference; the inference instead goes in the opposite direction, in that example (82b') implies (82b).

- (82) a. Veel kinderen drenzen en schreeuwen.  $\Rightarrow$   
 many children whine and yell
- a'. Veel kinderen drenzen en veel kinderen schreeuwen.  
 many children whine and many children yell
- b. Weinig kinderen drenzen en schreeuwen.  $\nRightarrow$   
 few children whine and yell
- b'. Weinig kinderen drenzen en weinig kinderen schreeuwen.  
 few children whine and few children yell

Another implicational difference between these two quantifiers is given in (83). If example (83a) with the high degree modifier *veel* 'many' is true, the same thing holds for example (83a'), where the VP *zwemmen* 'to swim' denotes a superset of the VP *in de zee zwemmen* 'to swim in the sea' in (83a). In contrast, this implication is not valid in (83b&b'), where the quantifier *weinig* expresses low degree, since there may be many children swimming in the swimming pool; again, the inference goes in the opposite direction: example (83b') implies (83b).

- (83) a. Er zwemmen veel kinderen in de zee.  $\Rightarrow$   
           there swim       many children in the sea  
           'Many children swim in the sea.'
- a'. Er zwemmen veel kinderen.  
           there swim       many children
- b. Er zwemmen weinig kinderen in de zee.  $\nRightarrow$   
           there swim       few children       in the sea  
           'Few children swim in the sea.'
- b'. Er zwemmen weinig kinderen.  
           there swim       few children

These kinds of implications, which have been extensively dealt with in the formal semantic literature of the last two or three decades, are not limited to quantifiers: example (84) shows, for example, that definite noun phrases behave in essentially the same way as the sentences involving a high degree modifier.

- (84) a. De kinderen drenzen en schreeuwen.  $\Rightarrow$   
           the children whine and yell
- a'. De kinderen drenzen en de kinderen schreeuwen.  
           the children whine and the children yell
- b. De kinderen zwemmen in de zee.  $\Rightarrow$   
           the children swim in the sea
- b'. De kinderen zwemmen.  
           the children swim

The semantic properties of the quantifiers of the type discussed above have repercussions for, e.g., the licensing of 'negative polarity elements: a noun phrase containing the quantifier *weinig* 'few' can, for example, license the negatively polar verb *hoeven* 'have to', whereas a noun phrase containing the quantifier *veel* 'many' cannot. Since correlations like these have given rise to a vast amount of literature, which deserves a more extensive discussion than we can give here, we will not discuss the issue any further, but we hope to return to it in future work. For the moment, we confine ourselves to referring to Zwarts' (1981) pioneering work on this topic.

- (85) a. Weinig mensen hoeven te vrezen voor hun baan.  
           few people have to fear for their job  
           'Few people need to fear losing their job.'
- b. \*De/Veel mensen hoeven te vrezen voor hun baan.  
           the/many people have to fear for their job

#### IV. Use as modifier or as independent argument

So far, we have only discussed examples with quantifiers that are used as modifiers of the noun phrase. A quantifier can, however, also be used as an independent constituent, that is, as an argument or a °floating quantifier. Examples of these two uses are given in, respectively, the primeless and the primed examples of (86). The following sections will also discuss these independent uses.

- (86) a. Allen gingen naar de vergaderzaal.  
           all<sub>[+human]</sub> went to the meeting.hall  
       a'. Ze zijn allen naar de vergaderzaal gegaan.  
           they are all<sub>[+human]</sub> to the meeting.hall gone  
       b. Alle zijn uitverkocht.  
           all<sub>[-human]</sub> are sold.out  
       b'. Ze zijn alle verkocht.  
           they are all<sub>[-human]</sub> sold

The examples in (86) show that there are two spellings for the independent occurrences of the quantifiers ending in a schwa: with or without a final *-n*. The presence of this orthographic *-n*, which is not pronounced in spoken Dutch, depends on the feature  $[\pm\text{HUMAN}]$  of the referent or associate: the form without *-n* is used with  $[-\text{HUMAN}]$  and the form with *-n* with  $[\text{+HUMAN}]$  nouns. Note that  $[\text{+HUMAN}]$  should be understood as “consistently human”: conjunctions which are not consistently human, like *mannen en hun auto's* ‘men and their cars’, take *alle*, not *allen*, as their independent quantifier. Note further that the examples in (86) are all formal, and most often found in writing; in colloquial speech, the preferred way to express the intended contentions would take the form of the primed examples with *allemaal* ‘all’ substituted for *alle(n)* ‘all’: *Ze zijn allemaal naar de vergaderzaal gegaan/Ze zijn allemaal verkocht*.

#### 6.2.2. Universal quantifiers

This section discusses the universal quantifiers. We will start in Section 6.2.2.1 with their use as modifiers of the noun phrase. After that, we will examine their use as independent constituents: Section 6.2.2.2 discusses their use as arguments, and Section 6.2.2.3 their use as floating quantifiers.

##### 6.2.2.1. Use as modifier

Dutch has three universal quantifiers that can be used as modifiers: *ieder/elk* ‘every’ and *alle* ‘all’. These quantifiers are all universal in the sense that examples like (87) express that the set denoted by *student* is a subset of the set denoted by the VP *een studentenkaart krijgen* ‘to receive a student ticket’. In terms of Figure 1, this means that  $A - (A \cap B) = \emptyset$ .

- (87) a. Iedere/elke student krijgt een studentenkaart.  
           every student receives a student ticket  
       b. Alle studenten krijgen een studentenkaart.  
           all students receive a student ticket



The quantifiers *ieder* and *elk* in (87a) are more or less free alternants, although Haeseryn et al. (1997: 350) note that some speakers have a weak tendency to use *ieder* for [+HUMAN] nouns and *elk* for [-HUMAN] nouns. These two quantifiers differ from the quantifier *alle* in (87b) in several respects, which we will discuss in the following subsections.

### *I. Number*

The most conspicuous difference between the two types of modifiers in (87) is that noun phrases containing *ieder/elk* trigger singular agreement on the verb, whereas noun phrases containing *alle* trigger plural agreement. This is illustrated again in (88). These examples demonstrate the difference in grammatical number in yet another way: noun phrases modified by *ieder/elk* can only act as the antecedent of a singular pronoun like *zijn* 'his', whereas noun phrases modified by *alle* can only be the antecedent of a plural pronoun like *hun* 'their'.

- (88) a. Iedere/elke student moet<sub>sg</sub> zijn/\*hun opdracht op tijd inleveren.  
           every student       must   his/their assignment on time hand.in  
           'Every/Each student must hand in his assignment on time.'
- b. Alle studenten moeten<sub>pl</sub> hun/\*zijn opdracht op tijd inleveren.  
           all students       must   their/his assignment on time hand.in  
           'All students must hand in their assignment on time.'

This difference in number is not a purely grammatical matter, but is also reflected in the semantics. For example, verbs like *zich verzamelen* 'to gather' or *omzingelen* 'to surround' require their subject to be plural or at least to refer to a group of entities: such verbs may take a noun phrase modified by *alle* as their subject, but not a noun phrase modified by *elk/ieder*.

- (89) a. Alle studenten moeten zich in de hal verzamelen.  
           all students       must   REFL in the hall gather  
           'All students must gather in the hall.'
- a'. \*Elke/Iedere student moet zich in de hal verzamelen.  
           every student       must REFL in the hall gather
- b. Alle soldaten omsingelden het gebouw.  
           all soldiers       surrounded the building
- b'. \*Elke/Iedere soldaat omsingelde het gebouw.  
           every soldier       surrounded the building

The reason for this contrast in acceptability is that the noun phrases modified by *alle* may refer to the set of entities denoted by the head noun as a whole, that is, they allow a collective reading. Noun phrases modified by *elk/ieder*, on the other hand, do not allow this reading, but, instead, have a distributive reading: a noun phrase like *iedere/elke student* expresses that the property denoted by the VP holds individually for each entity in the set denoted by the head noun *student* or *soldaat*.

### *II. Distributivity versus collectivity*

The examples in (89) in the previous subsection have shown that noun phrases modified by *elk/ieder* have a distributive reading, whereas noun phrases modified by *alle* can have a collective reading. It must be pointed out, however, that *alle* is

also compatible with a distributive reading: this is the preferred reading of example (90a), the meaning of which is more or less equivalent to that of example (90b).

- (90) a. Alle boeken kosten €25.  
           all books      cost   €25  
       b. Elk/Ieder boek kost €25.  
           every book     costs €25

In other cases, noun phrases with *alle* are ambiguous between a collective and a distributive reading. This ambiguity can be readily illustrated by means of (91a). Under its distributive reading, this example is semantically equivalent to (91b); both sentences express then that the property of singing a song holds for each student individually, that is, the meaning of these sentences can be satisfactorily represented by means of a universal operator:  $\forall x$  (x:student) (x has sung a song). Under the collective reading of (91a), on the other hand, it is expressed that the students sang a certain song as a group, a reading unavailable for (91b). For this reading the semantic representation with a universal operator seems inappropriate: it is therefore important to note that, strictly speaking, it is somewhat misleading to use the notion of universal quantifier for this collective use of *alle*.

- (91) a. Alle studenten hebben een lied gezongen.  
           all students     have   a song   sung  
       b. Elke/iedere student heeft een lied gezongen.  
           every student     has   a song   sung

The collective reading of *alle studenten* can be forced by adding a modifier of the type *met elkaar* 'together' or *samen* 'together', as in (92a). That these modifiers force a collective reading is clear from the fact illustrated in (92b) that they are not compatible with the distributive quantifiers *ieder* and *elk*.

- (92) a. Alle studenten hebben met elkaar/samen een lied gezongen.  
           all students     have   with each/together a song   sung  
           'All students sang a song together.'  
       b. \*Elke/iedere student heeft met elkaar/samen een lied gezongen.  
           every student     has   with each/together a song   sung

### III. Predicative use

The fact that noun phrases with *alle* are ambiguous between a collective and a distributive reading, whereas noun phrases with *elk/ieder* only have a distributive reading, probably also accounts for the fact that only the former can be used as predicative noun phrases. In (93a), the predicative noun phrase refers to a group of students that consist of the four girls mentioned in the subject of the clause. In (93b), on the other hand, the predicative noun phrase does not refer to a group, and hence it cannot be predicated of the subject of the clause.

- (93) a. Die vier meisjes zijn alle studenten die ik heb.  
           those four girls   are   all students that I have  
       b. \*Die vier meisjes zijn iedere/elke student die ik heb.  
           those four girls   are   every/each student that I have

*IV. Numerals*

Another difference between the two types of universal quantifiers comes to the fore in noun phrases containing an ordinal numeral. An example like (94a) is fully acceptable, and expresses that the 100<sup>th</sup>, 200<sup>th</sup>, etc. visitor will receive a present. Example (94b), on the other hand, gives rise to a virtually uninterpretable result.

- (94) a. Iedere/elke honderdste bezoeker krijgt een cadeautje.  
           every/each hundredth visitor receives a present  
       b. <sup>\*?</sup>Alle honderdste bezoekers krijgen een cadeautje.  
           all hundredth visitors receive a present

When the noun phrase contains a cardinal numeral, the use of the quantifiers *ieder* and *elk* gives rise to a somewhat marked result: example (95a) divides the set of visitors into groups of ten persons each. Example (95b) is fully acceptable in a context where the cardinality of the set of visitors is 10; the quantifier *alle* then emphasizes that the property denoted by the VP *een cadeautje krijgen* 'to get a present' applies to all entities in this set. Generally it is assumed that the quantifier and the numeral constitute a phrase, which functions as a complex pre-determiner. The use of this pre-determiner *alle* + numeral is discussed more extensively in Section 7.1.2.2.

- (95) a. <sup>?</sup>Iedere/elke tien bezoekers krijgen een cadeautje.  
           every ten visitors receive a present  
       b. Alle tien (de) bezoekers krijgen een cadeautje.  
           all ten the visitors get a present

*V. Generic use*

The universal quantifiers *elke/iedere* and *alle* are not only used to quantify over a set of entities that are part of domain D, but they can also be used in generic statements, expressing a general rule which is assumed to be true in the speaker's conception of reality. As discussed in Section 5.1.1.5, we must distinguish the three types of generic statements in (96). Here, we will only discuss the first two types.

- (96) a. De zebra is gestreept.  
           the zebra is striped  
       b. Een zebra is gestreept.  
           a zebra is striped  
       c. Zebra's zijn gestreept.  
           zebras are striped

When a generic statement contains a definite noun phrase, the generic statement generally applies to (entities that belong to) a certain species. Example (97a) refers to a certain species of birds, and it is claimed that this species is extinct. In this case, the definite article cannot be replaced by the universal quantifiers *alle* and *elke/iedere*.

- (97) a. De Dodo is uitgestorven.  
           the Dodo is extinct  
       b. <sup>#</sup>Alle Dodo's zijn uitgestorven.  
           all Dodos are extinct

- c. \*Elke/Iedere dodo is uitgestorven.  
every dodo is extinct

Note, however, that the universal quantifier *alle* would be acceptable in a situation in which the noun denotes a species that can be divided into several subspecies: in such a case, *alle* would quantify over all subspecies. The quantifiers *elk/ieder* would still yield an unacceptable result in such a case. The examples in (98) aim at illustrating this.

- (98) a. De Dinosaur is uitgestorven.  
the Dinosaur is extinct  
b. Alle Dinosaurussen zijn uitgestorven.  
all Dinosaurs are extinct  
c. \*Elke/Iedere dinosaur is uitgestorven.  
every dinosaur is extinct

When a generic statement contains an indefinite noun phrase, the generic statement generally applies to a prototypical member of the set denoted by the head noun. Example (99a) claims that the prototypical zebra is striped. In this case, the indefinite article can readily be replaced by the universal quantifier *alle*: example (99b) simply claims that the property of being striped holds for all zebras. The quantifiers *ieder* and *elk* can also be used in this context, but, as Haeseryn et al. (1997: 349) note, in this case the sentence has an emphatic flavor: each and every entity that is a zebra is striped.

- (99) a. Een zebra is gestreept.  
a zebra is striped  
b. Alle zebra's zijn gestreept.  
all zebras are striped  
c. <sup>?</sup>Iedere/Elke zebra is gestreept.  
every zebra is striped

## VI. Agreement

The grammatical gender feature may also serve to distinguish *elk/ieder* and *alle* in that the form of the former depends on the gender of the head noun, whereas the latter is invariant. This distinction is of course related to the fact that the head noun is singular in the former case, whereas it is plural in the latter: gender agreement of a modifier and a singular head noun is very common, whereas the form of the modifier of a plural noun is generally insensitive to the gender of the noun; cf. Section 3.2.1.

- (100) • Ieder and elk
- |     |                      |            |
|-----|----------------------|------------|
| a.  | iedere/elke man      | [de man]   |
|     | every/each man       |            |
| a'. | ieder/elk kind       | [het kind] |
|     | every/each child     |            |
| b.  | alle mannen/kinderen |            |
|     | all men/children     |            |

Observe that the *de*-nouns *mens* ‘person’ and *persoon* ‘person’ are exceptional in not accepting/requiring the inflectional *-e* ending. This is illustrated in (101).

- (101) a. elk(\*e)/ieder(\*e) mens  
           every/each       person  
       b. elk(e)/ieder(e)   persoon  
           every/each       person

### VII. Non-count nouns

A final difference between *iets/elk* and *alle* involve non-count nouns. Since universal quantifiers typically quantify over a set of discrete entities, universal quantifiers are not expected to combine with non-count nouns. As is shown in (102a) for abstract non-count nouns, this expectation is indeed borne out for *elke/ieder*. The quantifier *alle*, on the other hand, can combine with such non-count nouns. It seems reasonable to connect this difference to the fact that only *alle* can give rise to a collective reading: in the case of non-count nouns, this collective reading appears in the guise of a “total quantity” reading.

- (102) a. \*Elke/iedere ellende is ongewenst.  
           every       misery is unwanted  
       b. Alle ellende is voorbij.  
           all misery is passed  
           ‘All misery has passed.’

Of course, this does not mean that *iets/elk* can never be combined with a non-count noun, but if it does there will be a semantic clash between the reading of *iets/elk* and that of the non-count noun, and as a consequence the non-count noun will get reinterpreted as a count noun. The noun phrase containing the substance noun *wijn* in (103a), for example, normally refers to some contextually determined quantity of wine. In (103b), on the other hand, *iets/elk* trigger a count noun interpretation on this noun, which now means “type of wine”. The quantifier *alle* allows both the non-count and the count noun interpretation: in the former case the noun *wijn* appears in the singular, as in (103c), and in the latter it appears in the plural, as in (103c’).

- (103) a. De wijn wordt gekeurd.  
           the wine is sampled  
       b. Elke/iedere wijn wordt gekeurd.  
           every wine is sampled  
       c. Alle wijn wordt gekeurd.  
           all wine is sampled  
       c’. Alle wijnen worden gekeurd.  
           all wines are sampled

#### 6.2.2.2. Use as argument

When a universal quantifier is used as an argument, it will generally be realized as the [+HUMAN] quantified pronoun *iedereen* ‘everyone’ or the [-HUMAN] quantified pronoun *alles* ‘everything’ in (104), discussed in Section 5.2.

- (104) a. Iedereen ging naar de vergaderzaal.  
 everyone went to the meeting.hall  
 b. Alles is uitverkocht.  
 everything is sold.out

The quantifier *alle(n)* in (105) may perform the same role as the quantifiers *iedereen/alles* in (104): if the context provides sufficient information about the intended referent set, it is possible to use *alle(n)* as a pronominal quantifier instead of the full quantified noun phrases *alle studenten/boeken* ‘all students/books’.

- (105) a. Alle studenten/Allen gingen naar de vergaderzaal.  
 all students/all went to the meeting.hall  
 b. Alle boeken/Alle zijn uitverkocht.  
 all books/all are sold.out

It is also possible to use the modifiers *ieder* and *elk* as arguments, although this is considered very formal. The independent use of these quantifiers seems more or less restricted to contexts in which they are modified by means of a postnominal *van*-PP where the complement of *van* is a plural pronoun/noun phrase. In examples like (106), there is a strong tendency to use *ieder* for [+HUMAN] referents; the tendency to restrict the use of *elk* to [-HUMAN] entities seems somewhat weaker.

- (106) a. Ieder/<sup>?</sup>Elk van ons weet dat de voorzitter geroyeerd is.  
 each of us knows that the chairman expelled is  
 ‘Each of us knows that the chairman is expelled.’  
 b. Elk/<sup>?</sup>Ieder van die boeken is een fortuin waard.  
 each of those books is a fortune worth  
 ‘Each of those books is worth a fortune.’

There are, however, some idiomatic examples in which *ieder* is used independently without a modifier being present as in, e.g., *ieder zijn deel* ‘everyone will get his share’. Furthermore, *ieder* can be used independently without a modifier when it heads an indefinite noun phrase introduced by the article *een*; this seems impossible with *elk* (although some incidental cases can be found on the internet).

- (107) Een ieder/<sup>\*?</sup>elk weet dat de voorzitter geroyeerd is.  
 an each knows that the chairman expelled is  
 ‘Everyone knows that the chairman is expelled.’

### 6.2.2.3. Use as floating quantifier

Floating quantifiers are quantifiers which are associated to noun phrases occurring elsewhere in the sentence, but with which they do not form a syntactic constituent. This use, which is restricted to universal quantifiers, is illustrated in (108). In this case, too, the difference between *ieder/elk* and *allen* seems to be that the former have a distributive reading, whereas the latter has a more collective flavor: it is, however, harder to demonstrate the difference here since it is not the case that (108b) can be used to express that the students received one hundred euros as a group.

- (108) a. De studenten kregen ieder/elk honderd euro.  
           the students got each hundred euro  
           ‘The students got a hundred euros each.’  
       b. De studenten kregen allemaal/?allen honderd euro.  
           the students got all hundred euro  
           ‘All the students got a hundred euros.’

Our impression can perhaps be substantiated by means of the examples in (109). Since the predicate *bij elkaar komen* requires a plural/collective subject, we may account for the contrast between the two examples by appealing to the fact that the quantifiers *ieder* and *elk* force a distributive reading of the subject, whereas *alle(maal)* allows either a collective or a distributive reading. Recall that the use of *allen* is somewhat formal: in speech it is generally the form *allemaal* that is used.

- (109) a. \*De studenten kwamen ieder/elk bij elkaar.  
           the students came each together  
       b. De studenten kwamen allemaal/?allen bij elkaar.  
           the students came all together

The use of floating quantifiers with [-HUMAN] antecedents seems somewhat more restricted than with [+HUMAN] ones. The use of the distributive quantifiers in (110a) seems to give rise to an especially degraded result: although *elk* is accepted by some speakers, *ieder* is categorically rejected. In (110b), *allemaal* is clearly preferred to *alle*.

- (110) a. De vliegtuigen worden %elk/\*ieder gekeurd.  
           the airplanes are each examined  
       b. De vliegtuigen worden allemaal/?alle gekeurd.  
           the airplanes are all examined

When the antecedent is interrogative, only the floating quantifier *allemaal* seems possible: *elk/ieder* and *alle(n)* all give rise to a degraded result. In (111), we give examples involving a [+HUMAN] antecedent.

- (111) a. \*Wie/?welke studenten kregen er elk/ieder honderd euro?  
           who/which students got there each hundred euro  
       b. Wie/welke studenten kregen er allemaal/\*allen honderd euro?  
           who/which students got there all hundred euro

Here we will not go any deeper into the properties of these floating quantifiers. A more general discussion on floating quantifiers can be found in Section 7.1.4.3, which also includes a discussion of floating quantifiers like *beide* ‘both’ and *alletwee* ‘all two’.

### 6.2.3. Existential quantifiers

This section discusses existential quantifiers like *sommige* ‘some’ and *enkele* ‘some’. We will start in Section 6.2.3.1 with their use as modifiers of the noun phrase. After that, Section 6.2.3.2 will continue with their use as arguments; existential quantifiers cannot be used as floating quantifiers.

### 6.2.3.1. Use as modifier

This section discusses the use of existential quantifiers like *sommige* ‘some’ and *enkele* ‘some’ as modifiers of a noun phrase. These quantifiers are existential in the sense that examples like (112) express that the set denoted by the VP *op straat lopen* ‘to walk in the street’ is not empty.

- (112) a. *Sommige jongens lopen op straat.*  
           some boys           walk   in the.street  
           ‘Some boys walk in the street.’  
       b. *Er    lopen enkele jongens   op straat.*  
           there walk   some boys       in the.street  
           ‘Some boys walk in the street.’

Although the two translations given in (112) are the same, there is a clear difference between the two examples. The noun phrase in (112a) refers to a subset of the boys in domain D. In terms of Figure 1, this means that it expresses that the intersection of the set of boys (set A) and the set of entities that are walking in the street (set B) is non-empty:  $A \cap B \neq \emptyset$ . Example (112b), on the other hand, does not presuppose a set of boys in domain D: it rather functions as a presentational sentence that introduces some new entities into domain D.

Note that it is often claimed that the existential quantifiers *sommige* and *enkele* express not only that the relevant set is non-empty, but also that the cardinality is both higher than 1 and rather low. It is not clear *a priori* whether this is all actually part of the lexical meaning of the quantifier. If we were correct in our earlier assumption in Section 5.1.1.1 that the plural marking on the noun expresses that  $|A \cap B| \geq 1$ , the implication in (112) that  $|A \cap B| > 1$  may indeed be due to the presence of the quantifier. However, the fact that the cardinality is construed as rather low may be the result of a conversational implicature: since the speaker can use a high degree quantifier to express that the cardinality is high, the absence of such a high degree quantifier suggests that the cardinality is only moderate (Grice’s Maxim of Quantity). For the moment, we leave this issue as it is, and assume that the existential quantifiers simply express that the relevant set is non-empty and that they may or may not impose further restrictions on the cardinality of the set.

The quantifiers *enkele* and *sommige* (on their non-D-linked reading) are, respectively, °weak and strong quantifiers. As we have seen in Section 6.2.1, one of the properties of strong quantifiers like *sommige* is that they cannot occur in existential constructions containing the expletive *er* ‘there’, whereas weak quantifiers like *enkele* can; cf. example (112). Another property seems to be that, unlike at least some weak quantifiers, strong quantifiers cannot occur in nominal measure phrases. Some examples are given in (113). Note, however, that the distinction between weak and strong quantifiers is not absolute: as we will see the quantifier *enkele* can also be used as a strong quantifier, in which case it does not introduce new entities into domain D, but simply quantifies some set of entities within domain D.



- (113) a. Dat boek kost enkele/\*sommige tientjes.  
           that book costs some                   tenners  
       b. De schat ligt enkele/\*sommige meters onder de grond.  
           the treasure lies some meters                   under the ground

As is shown in (114), universal quantifiers cannot be used in constructions containing expletive *er* either, nor in nominal measure phrases, so they must be considered strong quantifiers as well. In other words, universal quantifiers like *alle* 'all' or *elk* 'each' form a natural class with existential quantifiers like *sommige*. *Enkele*, on the other hand, forms a natural class with the cardinal numerals, which can occur in these constructions.

- (114) a. \*Er lopen alle jongens op straat.  
           there walk all boys           in the.street  
       a'. Er lopen vijf jongens op straat.  
           there walk five boys       in the.street  
       b. \*Dat boek kost alle tientjes.  
           that book costs all tenners  
       b'. Dat boek kost drie tientjes.  
           that book costs three tenners

The examples in (112) express that the cardinality of the set of boys walking in the street is larger than 1. In this respect, the quantified noun phrases *sommige jongens* and *enkele jongens* seem to behave as plural counterparts of the noun phrases in (115a&b) introduced by the indefinite article *een* 'a' (note, however, that because *een* must be stressed in (115a), we cannot exclude the possibility that we are actually dealing with the numeral *één* 'one' in this example). Therefore, it would be justified to also treat the indefinite article in this section. However, since we have discussed this element in Section 5.1 on articles, we will refrain from doing so. The same thing holds for the negative article in (115c), which can readily be considered a negative existential quantifier ( $\neg\exists x$ ).

- (115) a. Eén jongen loopt op straat.  
           a/one boy walks in the.street  
       b. Er loopt een jongen op straat.  
           there walks a boy           in the.street  
       c. Er loopt geen jongen op straat.  
           there walks no boy           in the.street

In the remainder of this section, we will discuss various types of existential quantifiers in more detail. In the course of the discussion we will observe that the distinction between existential and degree quantifiers is not always clear-cut.

### *I. Enkele 'some' and sommige 'some'*

The most common existential quantifiers are *enkele* and *sommige*. The two differ in that the former can be weak whereas the latter is necessarily strong. That *enkele* can be a weak quantifier is clear from the examples in (116), in which *enkele* is used as the modifier of a subject. Under neutral intonation, the clause preferably takes the form of an expletive construction, as in (116a); example (116b) is normally

pronounced with emphatic °focus on the quantifier. The two examples differ in interpretation: in (116a) the subject introduces some new entities into domain D, whereas in (116b) the subject has a partitive reading, that is, domain D already includes a set of boys and the sentence expresses that some of these boys are walking in the street.

- (116) a. Er lopen enkele jongens op straat.  
           there walk some boys in the.street  
           ‘There are some boys walking in the street.’  
       b. Enkele/?Enkele jongens lopen op straat.  
           some boys walk in the.street  
           ‘Some (of the) boys are walking in the street.’

That the quantifier *sommige* is necessarily strong is clear from the fact that the expletive construction in (117b) is impossible. This quantifier therefore cannot be used to introduce new discourse entities, but normally quantifies over a pre-established set of boys in domain D.

- (117) a. Sommige jongens lopen op straat.  
           some boys walk in the.street  
           ‘Some boys walk in the street.’  
       b. \*Er lopen sommige jongens op straat.  
           there walk some boys in the.street

## II. Wat ‘some’

Another existential quantifier that is quite frequent is *wat* ‘some’. This quantifier is clearly weak, as shown by the fact that only the expletive construction is acceptable in (118); the (b)-example cannot be remedied by means of assigning emphatic accent to the quantifier.

- (118) a. Er lopen wat jongens op straat.  
           there walk some boys in the.street  
           ‘There are some boys walking in the street.’  
       b. \*Wat jongens lopen op straat.

A conspicuous difference between *wat*, on the one hand, and *enkele* and *sommige*, on the other, is that the former can readily be used as a modifier of non-count nouns, whereas the latter normally cannot. This is shown in (119).

- (119) a. Ik heb wat bier gekocht.  
           I have some beer bought  
       b. \*Ik heb enkele/sommige bier gekocht.

The ability to act as a modifier of a non-count noun is also a property of degree modifiers such as *veel* ‘many/much’ discussed in Section 6.2.4. It might therefore be the case that *wat* is not a simple existential quantifier, but that it is actually a degree quantifier. Such a point of view could be supported by pointing out that, unlike *enkele* and *sommige*, *wat* can be modified by °intensifiers like *nogal*, *vrij*, *tamelijk*, *heel*, *aardig*. This is illustrated in (120), where the cardinality of the set denoted by *boeken* is indeed compared to some implicit norm.

- (120) a. Jan heeft nogal/heel/aardig wat boeken.  
 Jan has quite/very/quite some books  
 'Jan has a quite a few books.'  
 b. \*Jan heeft nogal/heel/aardig enkele/sommige boeken.

To conclude this discussion on *wat*, we want to mention in connection to the observation that *wat* can precede non-count nouns that Haeseryn et al. (1997: 370) note that, in contrastive contexts, *sommige* can sometimes also be combined with substance nouns like *bier* 'beer' with a "kind" interpretation, as in (121a). Although we have indeed found a small number of such cases on the internet, we much prefer the use of the plural form *bieren* here, in which case we are clearly dealing with a count noun.

- (121) a. %Sommig bier heeft een bittere nasmaak.  
 some beer has a bitter aftertaste  
 b. Sommige bieren hebben een bittere nasmaak.  
 some beers have a bitter aftertaste

### III. Other cases

Besides the existential quantifiers discussed above, Dutch has many other formatives that can be used in a similar fashion. This section briefly discusses some of these formatives: we first start with a number of simple forms, and conclude with some forms that are phrase-like.

#### A. Enig(e)

Example (122a) shows that the form *enige* can be found in formal language as a weak quantifier. Example (122b) shows that it differs from *enkele* in that it can also combine with non-count nouns. In this respect it resembles *wat*, from which it differs, however, in not allowing degree modification; cf. (122c).

- (122) a. Er liggen enige/enkele boeken op de tafel.  
 there lie some/some books on the table  
 b. Enige/\*enkele tijd geleden was ik ziek.  
 some/some time ago was I ill  
 c. nogal/heel/aardig wat/\*enige boeken  
 quite/very/quite some/some books

The examples in (123) show that *enige* can also be used as an equivalent of English *any*, as in (123a), or as an attributive adjective corresponding to "only" or "cute"; cf. Haeseryn et al. (1997: 366ff.). Note that the ambiguity of (123c) can be solved by using the superlative form *enigst* in (123c'); although there is normative pressure to not use this form, it is often used with the meaning "only"; for more discussion, see [www.onzetaal.nl/advies/enigste.php](http://www.onzetaal.nl/advies/enigste.php).

- (123) a. Heb je wel enig benul van wat dat kost?  
 have you prt. any idea of what that costs  
 'Do you have any idea of what that costs?'  
 b. Dat is de enige oplossing.  
 that is the only solution

- c. Hij is een enig kind.  
he is a cute/only child
- c'. Hij is een enigst kind.  
he is an only child

#### B. *Verscheidene, verschillende/meerdere, and ettelijke*

The quantifiers *verscheidene/meerdere* 'various', *verschillende* 'several', and *ettelijke* 'a number of' in (124) can be used either as weak or as strong quantifiers. These quantifiers are always followed by a plural noun and tend to be used when the cardinality of the relevant set is somewhat higher than 2. For this reason, it is not so clear whether these quantifiers must be considered existential quantifiers: they might as well be degree quantifiers.

- (124) a. Er liggen *verscheidene/verschillende/ettelijke/meerdere* boeken op de tafel.  
there lie various/several/a.number.of/several books on the table  
'Various/several/a number of books are lying on the table.'
- b. *Verscheidene/Verschillende/Ettelijke/Meerdere* boeken waren afgeprijsd.  
various/several/a.number.of/several books were prt.-priced  
'Various/Several/A number of/Several books were marked down.'

The quantifier *verschillende* in (124) suggests that the entities in the relevant set of books are of different sorts. This is even clearer in the case of *allerlei/allerhande* 'all kinds/sorts of' in (125), which can only be used when the relevant set contains different categories of books, e.g., novels, books of poetry, textbooks, etc.

- (125) Er liggen *allerlei/allerhande* boeken op de tafel.  
there lie all sorts of books on the table  
'All sorts of books are lying on the table.'

Note, finally, that *verschillende* can also be used with the meaning "different", in which case it clearly functions as an adjective, as shown by the fact that in this use it can be modified by a degree adverb and be used in predicative position.

- (126) a. Dit zijn twee totaal verschillende opvattingen.  
this are two completely different opinions
- b. Deze twee opvattingen zijn totaal verschillend.  
these two opinions are totally different

#### C. *Menig(e)*

The final simple form we will discuss here is *menig(e)* 'many'. This form is typically used in writing, and can only be used with singular count nouns. Like the quantifiers discussed in the previous subsection, *menig* tends to be used when the cardinality of the relevant set is somewhat higher than 2, and it should for that reason perhaps be considered a degree quantifier. The uninflected form *menig* is used with *het*-nouns, and, optionally, with some [+HUMAN] *de*-nouns, especially with *man* 'man', *persoon* 'person', and nouns denoting professions. The inflected form *menige* is used in all other cases.

- (127) a. *menig boek* [ +neuter]  
           many book  
       b. *menig(-e) arts* [-neuter, person name]  
           many physician  
       c. *menig\*(-e) roman* [-neuter]  
           many novel

According to our judgments on the examples in (128), the quantifier *menig* is strong; it is preferably °D-linked, as in (128a), and thus normally quantifies over a presupposed set in domain D. Examples like (128b) sound marked, although it must be noted that the example improves considerably when the sentence contains an adverbial phrase like *al* ‘already’: *Er werd al menig staker ontslagen* ‘there were already many strikers fired’. Given that similar examples can be readily found on the internet (a search on the string [*er werd menig*] resulted in nearly 100 hits), we conclude that, at least for some speakers, *menig* may also be weak.

- (128) a. *Menig staker werd ontslagen.*    b. *°Er werd menig staker ontslagen.*  
           many striker was fired            there was many striker fired  
           ‘Many a striker was fired.’

Noun phrases modified by the strong quantifier *menig* can readily be used in “generic” statements, that is, in contexts in which *menig* quantifies over all relevant entities in the speaker’s conception of reality. This is illustrated in (129).

- (129) *Menig werknemer is ontevreden over zijn salaris.*  
           many employee is dissatisfied with his salary  
           ‘Many employees are not satisfied with their salary.’

#### *D. Complex forms*

Besides the simplex forms above, there are several phrasal or phrase-like constructions that seem to act as existential modifiers. Some examples are given in (130). Examples such as (130a) are extensively discussed in Section 4.1.1, to which we refer for further information. The phrase-like forms *deze of gene* and *één of andere* can be paraphrased as “some”: the former seems to behave like a strong quantifier, whereas the latter is preferably used as a weak quantifier.

- (130) a. *een paar schoenen*  
           a couple [of] shoes  
       b. *Deze of gene specialist moet toch kunnen helpen.*  
           this or yonder specialist must PRT be.able help  
           ‘But some specialist must be able to help.’  
       b’. *\*Er moet deze of gene specialist toch kunnen helpen.*  
           there must this or yonder specialist PRT be.able help  
       c. *Er loopt één of andere hond voor ons huis.*  
           there walks one or another dog in.front.of our house  
           ‘There is some dog walking in front of our house.’  
       c’. *\*°Één of andere hond loopt voor ons huis.*  
           one or another dog walks in.front.of our house

Despite its quantificational meaning, *deze of gene* in (130b) can probably best be considered a complex determiner: if it is a determiner comparable to simple *deze*, its strong nature would follow immediately. The examples in (131a&b) show that a similar approach is clearly not feasible for *één of ander*, given that this modifier can be preceded by a definite article. Note that despite being formally definite the noun phrases *de een of andere gek* and *het een of andere boek* behave like weak noun phrases, just like their formally indefinite counterparts in the primed examples; they all may enter the expletive construction. The data in (131b&b') suggest that we are dealing with a complex adjectival phrase in these examples: just like adjectival *ander* 'different', the phrase *een of andere* exhibits gender agreement with the noun.

- (131) a. Er staat de een of *andere* gek te zingen. [definite, -neuter]  
 there stands the one or other madman to sing  
 'There is some madman singing.'
- a'. Er staat een of *andere* gek te zingen. [indefinite, -neuter]  
 there stands one or other madman to sing  
 'There is some madman knocking on the door.'
- b. Er werd het een of *andere* boek gepresenteerd. [definite, +neuter]  
 there was the one or other book presented  
 'Some book was presented.'
- b'. Er werd een of *ander* boek gepresenteerd. [indefinite, +neuter]  
 there was one or other book presented  
 'Some book was presented.'

Finally, we should mention cases like *de nodige bezwaren* 'a good many objections'. Here we are clearly dealing with a borderline case. The noun phrase is formally a definite noun phrase, and *nodige* seems to act as a regular attributive adjective. However, the noun phrase does not refer to some entities in domain D, and again it can be used in the expletive construction. Note that the translation in (132) is somewhat misleading in that it suggests that a fairly large number of objections were raised, but this is not necessarily so; what seems to be implied is that the number of objections was sufficiently large to be relevant.

- (132) Er werden de nodige bezwaren geopperd.  
 there were the need objections given  
 'There were raised a good many objections.'

#### IV. Special uses of the existential quantifiers

This subsection concludes the discussion of the existential quantifiers used as modifiers with two special uses of the quantifiers *sommige* and *enkele*.

##### A. The use of *sommige* in "generic" contexts

The quantifier *sommige* is sometimes used in "generic" contexts, that is, to quantify over all relevant entities in the speaker's conception of reality: an example like (133a), for example, expresses that there is a subcategory of junkies that will never overcome their addiction. Such a "generic" use is not possible with *enkele*: in example (133b), the quantifier *enkele* must quantify over a contextually defined set of junkies.

- (133) a. Sommige junkies komen nooit van hun verslaving af.  
           some junkies       come   never from their addiction prt.  
           ‘Some junkies will never overcome their addiction.’  
       b. Enkele junkies komen nooit van hun verslaving af.  
           some junkies       come   never from their addiction prt.  
           ‘Some of the junkies will never overcome their addiction.’

In such “generic” cases, *sommige* may also trigger a “kind” interpretation on the noun it modifies. For example, *sommige medicijnen* ‘some medicines’ in (134a) may refer to, e.g., the types of medicines that fall into the class of barbiturates. *Enkele* in (134b) again does not have this effect: it can only quantify over a contextually defined set of medicines.

- (134) a. Sommige medicijnen kunnen de rijvaardigheid beïnvloeden.  
           some medicines       may    the driving.ability influence  
           ‘Some medicines may influence the ability to drive.’  
       b. Enkele medicijnen kunnen de rijvaardigheid beïnvloeden.  
           some medicines       may    the driving.ability influence  
           ‘Some of these medicines may influence the ability to drive.’

#### *B. The use of enkele as an attributive modifier*

*Enkele* can also be used as an attributive modifier. This use of *enkele* is characterized by the fact that *enkele* is followed by a singular noun. In (135a&b), the meaning of *enkele* is still quantificational in nature: despite the fact that the modified noun is singular, the noun phrase may actually refer to a non-singleton set with a low cardinality. In (135c), on the other hand, the presence of the numeral *één* ‘one’ triggers a reading of *enkele* that can be properly rendered by means of English *single*. In (135d), *enkele* has the meaning “one-way”: the phrase *een enkele reis* is especially used to refer to a one-way ticket.

- (135) a. Die enkele bezoeker<sub>sg</sub> die hier komt, is het noemen niet waard.  
           that ENKELE visitor   that here comes is the mention not worth  
           ‘Those few visitors who come here are not worth mentioning.’  
       b. Ik ben hier slechts een enkele keer<sub>sg</sub> geweest.  
           I am here only an ENKELE time been  
           ‘I have been here only a couple of times.’  
       c. Ik ben hier slechts één enkele keer<sub>sg</sub> geweest.  
           I am here only a SINGLE time been  
           ‘I have been here only once.’  
       d. een enkele reis naar Amsterdam  
           a one.way trip to Amsterdam  
           ‘a one-way ticket to Amsterdam’

#### *6.2.3.2. Use as argument*

When an existential quantifier is used as an argument, it is generally realized as the [+HUMAN] quantified personal pronoun *iemand* ‘someone’ or the [-HUMAN] quantified personal pronoun *iets/wat* ‘something’. Some examples are given in (136). These quantifiers are normally used as weak quantifiers, which is clear from

the fact that, as subjects, they are preferably used in expletive constructions. Examples like (136a'&b'), without the expletive *er*, are acceptable, but they generally require a special intonation pattern; these examples would be quite natural if the quantifier were assigned contrastive or emphatic °focus. Example (136b') with *wat* is, however, still excluded. We refer the reader to Section 5.2 for further discussion of these pronouns.

- (136) a. Er heeft iemand gebeld.      a'. ?Iemand heeft gebeld.  
           there has someone called  
           'Someone has called.'
- b. Er is iets/wat gevallen.      b'. ??Iets/\*Wat is gevallen.  
           there is something fallen  
           'Something has fallen.'

Many of the modifiers discussed in the previous section can also be used as independent arguments. This will be illustrated in the following subsections.

### 1. Enkele and sommige

The examples in (137) show that when the context provides sufficient information, it is possible to use *sommige(n)* as a pronominal quantifier instead of the full quantified noun phrases *sommige studenten/boeken* 'some students/books'. Recall that when the quantifier ends in a schwa, Dutch orthography requires a (mute) suffix *-n* on the quantifier when the elided noun is [+HUMAN]; when the elided noun is [-HUMAN] this *-n* is not used.

- (137) a. Sommige studenten/Sommigen gingen naar de vergaderzaal.  
           some students/some                      went to the meeting.hall
- b. Sommige boeken/sommige zijn uitverkocht.  
           some books/some                      are sold.out

The independently used quantifier *sommige(n)* is a strong quantifier. It is not so clear whether weak quantifiers like *enkele* 'some' can also be used as independent arguments. Consider the examples in (138). The fact that we are dealing with expletive constructions guarantees that the quantifiers in these examples are weak. The second occurrence of *er* in the primed examples is so-called quantitative *er*, which is associated with an interpretative gap in the noun phrase, which therefore has the form [<sub>QN</sub> enkele [<sub>NP</sub> e ]]. The fact, illustrated in the doubly-primed examples, that quantitative *er* cannot readily be left out suggests that, like the cardinal numerals, the weak quantifier can only act as the modifier of a noun phrase, which happens to be phonetically empty here, not as an independent argument.

- (138) a. Er gingen enkele studenten naar de vergaderzaal.                      [weak quantifier]  
           there went some students to the meeting.hall  
           'There were some students going to the meeting hall.'
- a'. Er gingen er [enkele [e]] naar de vergaderzaal.  
           there went ER some to the meeting.hall
- a''. ??Er gingen enkelen naar de vergaderzaal.  
           there went some to the meeting.hall



- b. Er werden enkele boeken verkocht. [weak quantifier]  
 there were some books sold  
 'Some books were sold.'
- b'. Er werden er [enkele [e]] verkocht.  
 there were ER some sold
- b''. \*Er werden enkele verkocht.  
 there were some sold

When *enkele* is used as a strong quantifier, similar complications do not arise; the primed examples in (139) are fully acceptable, just like those in (137) with the strong quantifier *sommige*.

- (139) a. Enkele studenten gingen naar de vergaderzaal. [strong quantifier]  
 some students went to the meeting.hall
- a'. Enkelen gingen naar de vergaderzaal.  
 some went to the meeting.hall
- b. Enkele boeken waren beschadigd. [strong quantifier]  
 some books were damaged
- b'. Enkele waren beschadigd.  
 some were damaged

The examples in (140) show that it is also possible to have *er* after the finite verb (in which case the spelling of *enkelen* in (139a') changes to *enkele*); this occurrence of *er* then simultaneously performs the function of expletive and quantitative *er*, and the quantifier is construed as a weak quantifier modifying an empty noun phrase.

- (140) a. [Enkele [e]] gingen er naar de vergaderzaal. [weak quantifier]  
 some went ER to the meeting.hall
- b. [Enkele [e]] waren er beschadigd. [weak quantifier]  
 some were ER damaged

## II. Wat

The evidence given in (138) in support of the claim that weak quantifiers cannot be used as independent arguments is not conclusive, given that dropping quantitative *er* does not give rise to fully ungrammatical results. Somewhat stronger support for this claim is provided by the existential quantifier *wat*, which cannot be used as a strong quantifier. As is shown in (141), dropping quantitative *er* in the primed examples gives rise to completely ungrammatical results.

- (141) a. Er gingen wat studenten naar de vergaderzaal.  
 there went some student to the meeting.hall  
 'There were some students going to the meeting hall.'
- a'. Er gingen er [wat [e]] naar de vergaderzaal.  
 there went ER some to the meeting.hall
- a''. \*Er gingen wat naar de vergaderzaal.  
 there went some to the meeting.hall

- b. Er werden wat boeken verkocht.  
there were some books sold  
'Some books were sold.'
- b'. Er werden er [wat [e]] verkocht.  
there were ER some sold
- b''. \*Er werden wat verkocht.  
there were some sold

Note that (141b'') without quantitative *er* is acceptable when the verb is singular, as is shown in (142a). But in this case we are not dealing with the use of the modifier *wat* as an independent argument, but with the colloquial form of the [-HUMAN] quantified personal pronoun *iets* 'something'. In this use *wat* can be modified by the degree modifiers *heel* 'very' and *nogal* 'quite', in which case it receives the interpretation 'a lot'. Other modifiers that can be used are *flink* 'quite' and *behoorlijk* 'quite'.

- (142) a. Er werd wat/iets verkocht.  
there was something sold  
'Something was sold'.
- b. Er werd daar heel/nogal wat verkocht.  
there was there very/quite something sold  
'A lot was sold there'.

### III. Other cases

With the other simple quantifiers discussed in 6.2.3.1, we generally also find a contrast between weak and strong quantifiers. The weak quantifiers in (143), for instance, can only occur when quantitative *er* is present.

- (143) a. Er liggen verscheidene/verschillende/ettelijke boeken op de tafel.  
there lie various/several/a.number.of books on the table  
'Various/several/a number of books are lying on the table.'
- b. Er liggen <sup>??</sup>(er) verscheidene/verschillende/ettelijke [e] op de tafel.  
there lie ER various/several/a.number.of on the table

The forms *allerlei* and *allerhande* in (144), however, can be used as independent arguments in formal language. The independent use of these forms requires singular agreement on the finite verb: in (144b), quantitative *er* is present and the verb exhibits plural agreement; in (144b'), quantitative *er* is absent and the verb exhibits singular agreement. Independent *allerlei* and *allerhande* therefore pattern with *wat* in (142) rather than with *sommige* in (137).

- (144) a. Er liggen allerlei/allerhande boeken op de tafel.  
there lie ll.sorts.of books on the table  
'All sorts of books are lying on the table.'
- b. Er liggen/\*ligt er [allerlei/allerhande [e]] op de tafel. [modifier of [NP e]]  
there lie/lies ER all.sorts.of (things) on the table
- b'. Er ligt/\*?liggen allerlei/allerhande op de tafel. [independent argument]  
there lies/lie all.sorts.of (things) on the table

Example (145) shows that the formal strong quantifier *menig* cannot be used as an independent argument, which may be related to the fact that, when the referent is [+HUMAN], the special form *menigeen* is used; a corresponding [-HUMAN] form does not exist, though.

- (145) a. *Menig staker werd ontslagen.*  
           many striker was fired  
           ‘Many strikers were fired.’  
       b. *Menigeen/\*Menig werd ontslagen.*  
           many was fired

The examples in (146a&b) show that the phrase-like quantifiers *deze of gene* and *een of ander* can also be used independently. The latter is special, however, since it can be preceded by a definite determiner and must therefore be analyzed as the head of an NP. The construction as a whole is also special, since the article *het* does not make the noun phrase definite, which is clear from the fact that it occurs in an expletive construction. In this connection it can be noted that *het een of ander* seems to be in a paradigm with *het een en ander* in (146b’), the head of which cannot be used as a modifier. The latter differs from the former in that (despite its triggering singular agreement on the verb) it is semantically plural in the sense that it refers to a non-singleton set of entities. Finally, example (146c) shows that *het nodige* can also be used independently.

- (146) a. *Deze of gene heeft geklaagd.*  
           this or that has complained  
           ‘Somebody (or other) has complained.’  
       b. *Er is gisteren het een of ander gebeurd.*  
           there is yesterday the one or other happened  
           ‘Something has happened yesterday.’  
       b’. *Er is gisteren het een en ander gebeurd.*  
           there is yesterday the one and other happened  
           ‘Several things have happened yesterday.’  
       c. *Er is gisteren het nodige gebeurd.*  
           there is yesterday the needed happened  
           ‘A good many things have happened yesterday.’

#### 6.2.4. Degree quantifiers

This section discusses degree quantifiers. Section 6.2.4.1 deals with their use as modifiers of the noun phrase. Section 6.2.4.2 is concerned with their independent use as arguments; degree quantifiers cannot be used as floating quantifiers.

##### 6.2.4.1. Use as modifier

This section discusses the use of gradable quantifiers as modifiers of the noun phrase. We will start with a discussion of the high/low degree quantifiers *veel/weinig* ‘many/few’, which indicate that the cardinality involved is higher/lower than some tacitly assumed norm. After that, we will discuss the degree quantifiers

like *voldoende* ‘sufficient’, *genoeg* ‘enough’ and *zat* ‘plenty’, which indicate that some tacitly assumed norm is met.

### I. High and low degree quantifiers

This section will discuss some properties of the high and low degree quantifiers *veel* and *weinig*. It must be noted that these quantifiers are not only used as modifiers of the noun phrase, but can also be used as adverbial phrases. Since it would disturb our present discussion too much to also discuss this adverbial use here, we will return to it in a separate section; cf. 6.2.6.

#### A. Core semantics and the nature of the head noun

The semantic representations in (147) show that degree quantifiers like *veel/weinig* ‘many/few’ are not only existential but express in addition that the cardinality of the intersection of the set denoted by the noun *jongens* and the VP *op straat lopen* ‘to walk in the streets’ is higher/lower than a certain contextually determined norm. Note that this norm is not some absolute number, but may have some lower and upper bound. In the semantic representations in (147),  $n$  and  $n'$  refer to, respectively, the lower and the upper bound of this range.

- (147)     • Degree quantifiers with count nouns
- a. Er    lopen weinig jongens op straat.  
       there walk few boys            in the.street
  - a'.  $\exists x (x:\text{boy}) (x \text{ walk in the street} \ \& \ 1 < |A \cap B| < n)$
  - b. Er    lopen veel jongens op straat.  
       there walk many boys        in the.street
  - b'.  $\exists x (x:\text{boy}) (x \text{ walk in the street} \ \& \ |A \cap B| > n')$

The degree quantifiers differ from the purely existential ones in that they modify not only (plural) count nouns like *jongens* ‘boys’ in (147), but also non-count nouns like the substance noun *water* in (148). Of course, the notion of cardinality is not applicable in the case of non-count nouns; instead, the degree quantifier expresses that the *quantity* of the substance denoted by the noun is higher/lower than a certain contextually determined norm.

- (148)     • Degree quantifiers with non-count nouns
- a. Er    zit veel water in de fles.  
       there is much water in the bottle
  - b. Er    zit weinig water in de fles.  
       there is little water in the bottle

#### B. Weak and strong use

In (147) and (148), the noun phrases modified by the degree quantifiers are the subject of an expletive construction, and are therefore clearly °weak. It is, however, also possible to use such noun phrases strongly. Examples of strong noun phrases with degree quantifiers are given in (149). As with the existential quantifier *enkele*, the degree modifiers *veel* and *weinig* may either quantify over a pre-established set of entities in domain  $D$ , or be more “generic”, that is, quantify over all the relevant entities in the speaker’s conception of reality. Under the first reading, an example

- The quantifiers *veel* and *weinig* are adjectival in nature, which is clear from the facts that these quantifiers can be modified by degree modifiers such as *erg* ‘very’ or *te* ‘too’, and that they can even be the input for comparative and superlative formation (although the superlative form of *weinig* often gives rise to a marked result).

|                       | VEEL                                               | WEINIG                                                  |
|-----------------------|----------------------------------------------------|---------------------------------------------------------|
| DEGREE MODIFICATION   | <i>erg/te veel boeken</i><br>'very/too many books' | <i>erg/te weinig boeken</i><br>'very/too few books'     |
| COMPARATIVE FORMATION | <i>meer boeken</i><br>'more books'                 | <i>minder boeken</i><br>'fewer books'                   |
| SUPERLATIVE FORMATION | <i>de meeste boeken</i><br>'most books'            | <sup>*?</sup> <i>de minste boeken</i><br>'fewest books' |

|          |                      |     |                                |
|----------|----------------------|-----|--------------------------------|
| (151) a. | de vele/*veel boeken | a'. | <sup>?</sup> de weinige boeken |
|          | the many books       |     | the few books                  |
| b.       | Ø vele boeken        | b'. | <sup>*?</sup> Ø weinige boeken |
|          | Ø many books         |     | Ø few books                    |
| c.       | veel boeken          | c'. | weinig boeken                  |
|          | many books           |     | few books                      |

The differences in inflection may be taken to indicate that the quantifier may occupy two different positions within the noun phrase: [<sub>DP</sub> D [<sub>QP</sub> Q [<sub>NP</sub> ... N ]]]. The uninflected quantifier may be taken to occupy the regular quantifier position Q, as

in (152a), whereas the inflected quantifier may be taken to occupy the position of an attributive adjective within NP, as in (152b).

- (152) a.  $[_{DP} D [_{QP} veel [_{NP} \dots N ] ] ]$   
 b.  $[_{DP} D [_{QP} Q [_{NP} vele N ] ] ]$

There is, however, one problem with such an assumption. As is shown by (153a), attributive adjectives may license N-ellipsis: the only requirement for this is that the context provides sufficient information to identify the content of the empty noun; cf. Section A5.4). N-ellipsis is, however, never possible with the high degree quantifier *veel* in (153b); this would, of course, be unexpected if it functions as an attributive adjective. We leave this point for future research, while noting that the superlative form of *vele*, *meeste* ‘most’, can be used in this construction; cf (153c).

- (153) • N-ellipsis  
 a. Hij heeft  $[_{DP}$  de blauwe  $e]$  verkocht.  
     he has       the blue       sold  
     ‘He has sold the blue one(s).’  
 b. \*Hij heeft  $[_{DP}$  de vele  $e]$  verkocht.  
     he has       the many       sold  
 c. Hij heeft  $[_{DP}$  de meeste  $e]$  verkocht.  
     he has       the most       sold  
     ‘He has sold most of them’.

## II. Voldoende ‘sufficient’, genoeg ‘enough’ and zat ‘plenty’

Besides the high and low degree quantifiers discussed above, there are quantifiers such as *voldoende* ‘sufficient’, *genoeg* ‘enough’ and *zat* ‘plenty’, which express that the cardinality of the intersection satisfies a certain contextually determined norm. The examples in (154) with *voldoende* ‘enough’ show that degree modifiers of this type are able to modify both count and non-count nouns, and are normally used with a weak reading. Recall from the discussion of the semantic representations in (147) that  $n$  and  $n'$  in (154a') refer to, respectively, the lower and the upper bound of the range that falls within the contextually determined norm.

- (154) a. Er lopen voldoende jongens op straat.  
           there walk enough boys           in the.street  
     a'.  $\exists x (x:\text{boy}) (x \text{ walk in the street} \ \& \ n \leq |A \cap B| \leq n')$   
     b. Er zit voldoende water in de fles.  
           there is enough water       in the bottle

The degree quantifiers like *genoeg* and *zat* allow somewhat more freedom in their syntactic distribution than the other degree quantifiers; (155) shows that these quantifiers need not be placed in prenominal position, but can also occur postnominally. This is reminiscent of their behavior as modifiers of the adjectives illustrated in the primed examples, where they *must* follow the modified element.

- (155) a. Hij heeft <genoeg> boeken <genoeg>.  
           he has enough books  
       a'. Hij is <\*genoeg> oud <genoeg>.  
           he is enough old  
       b. Hij heeft <zat> boeken <zat>.  
           he has plenty books  
       b'. Dat is <\*zat> moeilijk <zat>.  
           that is enough difficult

The quantifiers *genoeg* and *voldoende* (but not *zat*) can also be negated, thus expressing sentential negation. Two examples are given in (156). The examples differ in that sentential negation is brought about by means of the negative adverb *niet* in the case of *genoeg*, whereas in the case of *voldoende* negation is brought about by means of affixation with *on-*. Since negation is morphologically expressed on the quantifier itself in the case of *voldoende*, one might suggest that the negative adverb *niet* forms a constituent with the quantifier *genoeg* in (156a), and in fact there is some evidence that this is indeed the case; as (156a') shows, the presence of *niet* excludes postnominal placement of the quantifier, which might be due to the fact that the quantifier is now complex.

- (156) a. Hij heeft niet genoeg boeken.  
           he has not enough books  
           'He doesn't have enough books.'  
       a'. \*Hij heeft niet boeken genoeg.  
       b. Hij heeft onvoldoende boeken.  
           he has not.enough books  
           'He doesn't have enough books.'

Although there is some reason to assume that sentential negation is realized as part of the quantifier in (156), this cannot be the case for all negated quantifiers. This is clear from the examples in (157) with the quantifier *genoeg*. Example (157a), which has basically the same meaning as (156a), shows that the noun phrase *genoeg boeken* can be topicalized while stranding the negative adverb *niet*, which suggests that sentential negation can also be expressed externally to the quantified noun phrase, which is confirmed by example (157b), in which sentential negation is realized on the time adverb *nooit* 'never'. Example (157c) shows that sentential negation can also be expressed within the noun phrase by means of the negative article *geen* 'no'; this case contrasts sharply with the one in (156a), however, in that the quantifier must be placed postnominally.

- (157) a. Genoeg boeken heeft hij niet.  
           enough books has he not  
       b. Hij heeft nooit genoeg boeken.  
           he has never enough books  
       c. Hij heeft geen <\*genoeg> boeken <genoeg>.  
           he has no enough books

The examples in (156a&b) express that the cardinality of the set denoted by the noun does not satisfy the lower bound of the contextually determined norm. It is also possible to express that the cardinality exceeds the upper bound of this norm by using the complex phrase *meer dan genoeg/voldoende* ‘more than enough’; *zat* sounds somewhat marked (although we found a couple of cases on the internet). A more extensive discussion of examples like (158a) can be found in Section 6.2.5.

- (158) a. Hij heeft meer dan genoeg/voldoende boeken.  
           he has more than enough books  
           ‘He has more than enough books.’  
       b. <sup>?</sup>Hij heeft meer dan zat boeken.  
           he has more than plenty books

#### 6.2.4.2. Use as argument

This section discusses the use of the degree quantifiers as independent arguments. As in the previous section, we will discuss the high/low degree quantifiers *veel* and *weinig*, and the degree quantifiers *voldoende*, *genoeg* and *zat*, which indicate that some tacitly assumed norm is met, in separate subsections.

##### 1. High and low degree quantifiers

This section will make a distinction between uninflected and inflected *veel/weinig* and show that these two instances differ in several respects.

##### A. Uninflected *veel* and *weinig*

Like most existential quantifiers, the degree quantifiers *veel* and *weinig* are normally not used as independent arguments: example (159b) is acceptable due to the presence of °quantitative *er*, but example (159c), in which the quantifier is truly independent, is unacceptable.

- (159) a. Er lopen veel/weinig jongens op straat.  
           there walk many/few boys in the.street  
       b. Er lopen er [veel/weinig [*e*]] op straat.  
           there walk ER many/few in the.street  
       c. \*Er lopen veel/weinig op straat.  
           there walk many/few in the.street

Things are different, however, when we are dealing with non-count nouns. Since the quantitative *er* construction requires the empty noun to be plural, it does not really come as a surprise that example (160b) is excluded. However, in contrast to (159c), (160c) is acceptable. This example can be construed with a count noun interpretation, in which case *veel/weinig* can refer to a certain quantity of wine. Alternatively, *veel/weinig* may be construed as referring to a set of discrete entities of a miscellaneous sort (“loads of different things”).



- (160) a. Er zit veel/weinig wijn in de fles.  
           there is much/little wine in the bottle  
       b. \*Er zit er [veel/weinig [e]] in de fles.  
           there is ER much/little in the bottle  
       c. Er zit veel/weinig in de fles.  
           there is much/little in the bottle

The judgments on the examples in (159) and (160) remain the same when the quantifiers *veel* and *weinig* are modified by degree modifiers like *erg* 'very' or *te* 'too', or when they are replaced with their comparative forms *meer* 'more' and *minder* 'less'. Replacement by the superlative forms (*het*) *meest* '(the) most' and (*het*) *minst* '(the) least' is of course excluded since this would make the noun phrases definite; definite noun phrases do not license quantitative *er* and are not possible in expletive constructions.

The examples in (161) show that *veel/weinig* can also be used as the predicate in a copular construction or as a measure phrase with verbs like *kosten*. In this case, *veel* and *weinig* can also be replaced by both the comparative and the superlative form; the latter can optionally take an *-e* ending.

- (161) a. Dat is erg veel/weinig.  
           that is very much/little  
           'That is quite a lot/very little.'  
       b. Dat is meer/minder dan je nodig hebt.  
           that is more/less than you need have  
           'That is more/less than you need.'  
       c. Dat is het meest(e)/minst(e).  
           that is the most/least
- (162) a. Dat kost/weegt veel/weinig.  
           that costs/weights much/little  
       b. Dit boek kost meer/minder (dan dat boek).  
           this book costs more/less than that book  
       c. Dat boek kost het meest(e)/minst(e).  
           that book cost the most/least

### B. Inflected *vele(n)* and *weinige(n)*

The examples in (151), repeated here as (163), show that *veel* may also occur in an inflected form; inflected *weinige* gives rise to a marked/degraded result. When no overt article is present, *veel* can either be inflected or uninflected, and we assume that the form depends on the absence or presence of the phonetically empty indefinite article  $\emptyset$ .

- |                               |                                              |
|-------------------------------|----------------------------------------------|
| (163) a. de vele/*veel boeken | a'. <sup>?</sup> de weinige boeken           |
| the many books                | the few books                                |
| b. $\emptyset$ vele boeken    | b'. <sup>*?</sup> $\emptyset$ weinige boeken |
| $\emptyset$ many books        | $\emptyset$ few books                        |
| c. veel boeken                | c'. weinig boeken                            |
| many books                    | few books                                    |

The (a)-examples in (164) show that quantified non-count nouns never occur in noun phrases containing a definite article. If we conclude from this that it cannot co-occur with the indefinite article either, we correctly predict that non-count nouns are always preceded by the uninflected forms.

- |                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| (164) a. *de vele/veel melk<br>the much milk | a'. *de weinige melk<br>the little milk |
| b. *Ø vele melk<br>Ø much milk               | b'. *Ø weinige melk<br>Ø little milk    |
| c. veel melk<br>much milk                    | c'. weinig melk<br>little milk          |

It is not really surprising that the quantitative *er* construction in (165b) is acceptable to about the same degree as the examples in (165a). What is surprising, is that the independent uses of these quantifiers in (165c) also give rise to a more or less acceptable result; this shows that the inflected forms differ markedly from their uninflected counterparts in (159c), which cannot be used as independent arguments. Furthermore, the fact that both the independent use of *velen* and that of *weinigen* are judged grammatical suggests that there is in fact no direct relation between these independent uses of the quantifiers in (165c) and their use as modifiers of the noun phrases in (165a&b). Recall that the orthographic rules require a (mute) *-n* on the independently used quantifiers in (165c) when they are [+HUMAN].

- (165) a. Er lopen vele/\*<sup>?</sup>weinige mensen op straat.  
          there walk many/few people in the.street
- b. Er lopen er [vele/\*<sup>?</sup>weinige [e]] op straat.  
          there walk ER many/few in the.street
- c. Er lopen velen/slechts weinigen op straat.  
          there walk many/only few in the.street

The fact that the independently used quantifiers *velen* and *weinigen* in (165c) function as the subject of an expletive construction shows that they can be used as weak noun phrases, but they can also be used as strong noun phrases, as is illustrated by (166a). The remaining examples in (166) show that such independently used quantifiers can be used in all regular argument positions, that is, as a direct or indirect object or as the complement of a preposition.

- (166) a. Velen/Slechts weinigen hebben geklaagd over de kou. [subject]  
          many/only few have complained about the cold
- b. Ik heb daar velen/slechts weinigen ontmoet. [direct object]  
   I have there many/only few met  
   'I have met many/only few people there.'
- c. Ik heb velen/slechts weinigen een kaart gestuurd. [indirect object]  
   I have many/only few a postcard sent  
   'I have sent many/only few people a postcard.'
- d. Ik heb aan velen/slechts weinigen een kaart gestuurd. [complement of P]  
   I have to many/only few people a postcard sent  
   'I have given an unsatisfactory mark to many/only few people.'

*II. Other degree quantifiers*

The degree modifiers which express that the cardinality of the intersection satisfies a contextually determined norm pattern more or less like uninflected *veel* ‘many’ and *weinig* ‘few’. When *genoeg*, *voldoende* and *zat* trigger plural agreement on the finite verb, they must be accompanied by quantitative *er*.

- (167) a. Er lopen genoeg/voldoende/zat jongens op straat.  
           there walk enough/enough/plenty boys in the.street  
       b. Er lopen er [genoeg/voldoende/zat [*e*]] op straat.  
           there walk ER enough/enough/plenty in the.street  
       c. \*Er lopen genoeg/voldoende/zat op straat.  
           there walk enough/enough/plenty in the.street

However, when these elements trigger singular agreement, quantitative *er* cannot be realized. Just like *veel/weinig* in (160c), the quantifiers in (168c) can be construed with a non-count noun interpretation, in which case they refer to a certain quantity of wine, or they can be used to refer to a set of discrete entities of a miscellaneous sort.

- (168) a. Er zit genoeg/voldoende/zat wijn in de fles.  
           there is enough/enough/plenty wine in the bottle  
       b. \*Er zit er [genoeg/voldoende/zat [*e*]] in de fles.  
           there is ER enough/enough/plenty in the bottle  
       c. Er zit genoeg/voldoende/zat in de fles.  
           there is enough/enough/plenty in the bottle

*6.2.5. Modification of quantifiers*

As we have already briefly mentioned, the universal and degree quantifiers discussed here can be modified by means of adverbial phrases: this is not possible with existential quantifiers. In the subsections below, we will briefly discuss the various possibilities.

*I. Universal quantifiers*

Universal quantifiers are typically modified by approximative modifiers like *bijna* ‘nearly’, *nagenoeg* ‘almost’, *vrijwel* ‘nearly’ and *zowat* ‘about’. Some examples are given in (169).

- (169) a. Bijna/vrijwel/zowat iedereen is op vakantie.  
           nearly/nearly/about everyone is on holiday  
       b. Bijna/vrijwel/zowat alle boeken zijn verkocht.  
           nearly/nearly/about all books are sold

Being subject to modification by the approximative modifiers is a typical property of all universally quantified elements. It also holds for the pre-determiners *al* and *heel* in (170a&b), which are more extensively discussed in Chapter 7, and for universally quantified adverbial phrases like *nooit* ‘never’, etc.

- (170) a. Bijna al de boeken zijn verkocht.  
           nearly all the books are sold  
       b. Bijna heel het huis is schoon gemaakt.  
           nearly whole the house is clean made  
       c. Hij is bijna nooit thuis.  
           he is virtually never at home

In addition to the approximate modifiers above, universal quantifiers can be modified by modifiers that emphasize the fact that all entities satisfying the description are included, like *echt* ‘really’, *letterlijk* ‘literally’, *volstrekt* ‘completely’, *werkelijk* ‘really’, etc.

- (171) a. Hij heeft echt alles/alle boeken gelezen.  
           he has really all/all books read  
       b. Hij heeft met werkelijk/letterlijk iedereen/alle buren ruzie.  
           he has with really/literally everyone/all neighbors quarrel

Another way to achieve the same semantic effect is by using the *X maar dan ook X* construction in (172), involving the conjunction *maar*. Note that the emphasizing modifiers illustrated in (171) can also be part of the second conjunct of this construction; cf. Hoeksema (2001).

- (172) a. Hij heeft alles, maar dan ook (echt) alles gelezen.  
           he has all but DAN OOK really all read  
       b. Hij heeft alle, maar dan ook echt alle boeken gelezen.  
           he has all but DAN OOK really all books read

## II. Negative existential quantifiers

Approximative modifiers can be used not only with universal quantifiers, but also with negatively quantified noun phrases such as *niemand* ‘nobody’ or *geen boek* ‘no book’. This is, of course, not surprising given the fact that a negatively quantified phrase can readily be paraphrased by means of a universal quantifier; cf. the equivalence rule  $\neg\exists\Phi \leftrightarrow \forall\neg\Phi$ .

- (173) a. bijna niemand  
           nearly nobody  
       b. bijna geen student/studenten  
           virtually no student/students

It is also possible to use modifiers that emphasize that no entity satisfying the description is included, like *echt* ‘really’, *letterlijk* ‘literally’, *volstrekt* ‘completely’, *werkelijk* ‘really’, etc. The *X maar dan ook X* construction can also be used to achieve this semantic effect. When the conjunction involves the negative article *geen*, as in (174c), there is a strong preference to also include a modifier like *werkelijk*. In all these examples, the modified noun phrase is assigned contrastive accent.

- (174) a. Er was werkelijk NIemand/geen MENS aanwezig.  
           there was literally nobody/no person present  
       b. Er was NIemand maar dan ook (werkelijk) NIemand aanwezig.  
           there was nobody but DAN OOK really nobody present  
       c. Er was GEEN, maar dan ook ??(werkelijk) geen MENS aanwezig.  
           there was no, but DAN OOK really no person present

### III. Degree quantifiers

Uninflected high/low degree quantifiers *veel* and *weinig* can also be modified by means of degree modifiers, and in this respect these quantifiers pattern more or less like gradable adjectives. The inflected forms *vele* and *weinige*, on the other hand, defy modification, regardless of whether they are preceded by a determiner or not. This is shown by the examples in (175).

- (175) a. erg/heel/te veel/weinig boeken  
           very/very/too many/few books  
       b. \*(de) erg/heel/te vele/weinige boeken  
           the very/very/too many/few books

This restriction on modification of the inflected forms seems to coincide with the restrictions on comparative formation: whereas *meer* 'more' can be readily used in (176a), it gives rise to an ungrammatical result in (176b); note that *de mindere boeken* is acceptable under the, here irrelevant, reading "the books of lower quality".

- (176) a. meer/minder boeken  
           more/less books  
       b. \*(de) mere/mindere boeken  
           the more/less books

Like most gradable adjectives, *veel* and *weinig* have an interrogative counterpart, namely *hoeveel* 'how many/much'. Although *hoeveel* is normally written as a single word, the fact that it contains the element *veel* suggests that *veel* is the neutral form of the antonym pair *veel:weinig*. Finally, it can be observed that *weinig* can be coordinated with the quantified pronoun *niets* 'nothing' or with the negative article *geen* 'no', with the resulting meaning "hardly any(thing)".

- (177) a. Hij heeft weinig of geen boeken gelezen.  
           he has few or no books read  
           'He has read hardly any books.'  
       b. Hij heeft weinig of niets gelezen.  
           he has little or nothing read  
           'He has read hardly anything.'

The quantifier *voldoende* 'enough' can be modified by *ruim* 'amply', which indicates that the implicit norm is satisfied to more than a sufficient extent. The degree quantifiers *genoeg* 'enough' and *zat* 'plenty' lack this possibility. Both *voldoende* and *genoeg*, but not *zat*, can be modified by *net* 'just', which indicates that lower bound of the implicit norm has just been met.

- (178) a. Er zijn hier ruim/net voldoende computers.  
 there are here amply/just enough computers  
 b. Er zijn hier net/\*ruim genoeg computers.  
 there are here amply/just enough computers  
 c. \*Er zijn hier ruim/net zat computers.  
 there are here amply/just plenty computers

Example (179a) contains the sequence *meer dan voldoende/genoeg*. Given that *meer* is the comparative form of the degree quantifier *veel*, this example raises the question whether the quantifier *meer* modifies *voldoende/genoeg* or whether it is the other way around. The latter analysis can be supported by claiming that a comparative is normally modified by means of a *dan*-phrase. However, this particular use of the *dan*-phrase would be special in that it must precede, and cannot follow, the modified noun, as shown by the (a)-examples in (179); as is illustrated by the (b)-examples, *dan*-phrases used as modifiers of comparatives normally do not precede the modified noun. This fact may be given in support of the former analysis, according to which it is the comparative *meer* that modifies the degree quantifier; see Section 6.1.1.4, sub IV, for a similar constructions with cardinal numerals.

- (179) a. Zij heeft meer dan voldoende/genoeg boeken.  
 she has more than enough/enough books  
 'She has more than enough books.'  
 a'. \*Zij heeft meer boeken dan voldoende/genoeg.  
 b. Zij heeft meer boeken dan Jan.  
 she has more books than Jan  
 'She has more books than Jan.'  
 b'. \*Zij heeft meer dan Jan boeken.

### 6.2.6. A note on the adverbial use of the degree quantifiers

The previous section has discussed the high/low degree quantifiers *veel* and *weinig*, and it was shown that these quantifiers share several properties with gradable adjectives. It therefore does not come as a surprise that the distribution of the forms *veel* and *weinig* is not restricted to adnominal positions; they can also be used as adverbial phrases; cf. (180). To conclude this section on quantifiers, we will briefly discuss the properties of such adverbially used quantifiers.

- (180) a. Hij reist veel.  
he travels a lot  
b. Hij houdt veel van reizen.  
he likes much of travel  
'He likes traveling a lot.'
- a'. Hij reist weinig.  
he travels little  
b'. <sup>%</sup>Hij houdt weinig van reizen.  
he likes little of travel  
'He doesn't like traveling a lot.'

In the (a)-examples in (180), *veel* and *weinig* are used as adverbial phrases of frequency; they express that the degree of frequency is higher or lower than some contextually determined norm. The same elements seem to function as adverbial phrases of intensity as in the (b)-examples, although some speakers seem to object to the use of *weinig*, and prefer the use of *niet veel* ‘not much’ in this function. The

difference between the two adverbial uses can be made clearer by means of the examples in (181), which show that the degree-of-frequency quantifiers are in a paradigmatic relation with frequency adverbs like *vaak* 'often', whereas the degree of-intensity quantifiers are not.

- (181) a. Hij reist vaak.  
           he travels often  
       b. \*Hij houdt vaak van reizen.  
           he likes much of travel

Just like the adnominally used forms, the adverbially used forms of *veel* and *weinig* can be modified by degree modifiers like *erg* 'very' and *te* 'too', and they can also be the input of comparative and superlative formation.

- |                                                      |                                                     |
|------------------------------------------------------|-----------------------------------------------------|
| (182) a. Hij reist erg veel.<br>he travels very much | a'. Hij reist erg weinig.<br>he travels very little |
| b. Hij reist meer.<br>he travels more                | b'. Hij reist minder.<br>he travels less            |
| c. Hij reist het meest.<br>he travels the most       | c'. Hij reist het minst.<br>he travels the least    |
- 
- |                                                                         |                                                                         |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------|
| (183) a. Hij houdt erg veel van kaas.<br>'He likes cheese quite a lot.' | a'. %Hij houdt erg weinig van kaas.<br>'He doesn't like cheese a lot.'  |
| b. Hij houdt meer van kaas dan ik.<br>'He likes cheese more than I.'    | b'. Hij houdt minder van kaas dan ik.<br>'He likes cheese less than I.' |
| c. Hij houdt het meest van kaas.<br>'He likes cheese the most.'         | c'. Hij houdt het minst van kaas.<br>'He likes cheese the least.'       |

The interpretation of adverbial *veel* is sensitive to the semantic properties of the verb phrase with which it is construed; cf. Doetjes (1997: 126). When *veel* modifies a °stage-level predicate like the VP headed by *reizen* 'to travel' in (180a), a degree-of-frequency reading results; when an individual-level predicate like the VP headed by *houden van* 'to like' in (180b) is modified by *veel*, a degree-of-intensity interpretation ensues. However, not all individual-level VPs are compatible with *veel*; mental state verbs like *vertrouwen* 'trust', which take an NP-complement, do not combine with *veel*, though they are perfectly modifiable by *weinig* as well as by the comparative and superlative forms of both *veel* and *weinig*. *Veel* is therefore unique in this regard.

- |                                                               |                                                                 |
|---------------------------------------------------------------|-----------------------------------------------------------------|
| (184) a. *Hij vertrouwt Marie veel.<br>he trusts Marie much   | a'. ?Hij vertrouwt Marie weinig.<br>he trusts Marie little      |
| b. Hij vertrouwt Marie meer.<br>he trusts Marie more          | b'. Hij vertrouwt Marie minder.<br>he trusts Marie less         |
| c. Hij vertrouwt Marie het meest.<br>he trusts Marie the most | c'. Hij vertrouwt Marie het minst.<br>he trusts Marie the least |

Instead of *veel*, Dutch has to use one of the adverbs *zeer* 'or erg 'very' to express degree quantification for the individual-level verb phrase in (184a), and in the

everyday vernacular *niet erg* 'not a lot' is usually preferred to *weinig* in the low degree example in (184a'). The corresponding examples are given in (185).

- (185) a. Hij vertrouwt Marie erg/zeer.  
           he trusts Marie much  
       b. Hij vertrouwt Marie niet erg.  
           he trusts Marie little

In the (a)-examples in (186), which involve individual-level predicates, *veel/weinig* and *erg/niet erg* alternate without any significant semantic change. However, for stage-level predicates that are compatible with both *veel* and *erg*, like *hoesten* 'to cough' in (186), we find that there is a semantic distinction between these two modifiers: whereas *veel* and *weinig* in the (b)-examples express the degree of frequency, (*niet*) *erg* in the (c)-examples receives a purely non-quantificational, manner interpretation.

- (186) a. Hij houdt veel/erg van reizen.      a'. Hij houdt weinig/niet erg van reizen.  
           'He likes traveling a lot.'            'He doesn't like traveling a lot.'  
       b. Hij hoest veel.                            b'. Hij hoest weinig.  
           'He coughs a lot.'                    'He doesn't cough a lot.'  
       c. Hij hoest erg.                            c'. Hij hoest niet erg.  
           'He is coughing badly.'            'He isn't coughing badly.'

The contrast between (186b&c) can be replicated even more clearly in the case of adjectival predicates, as illustrated in (187); cf. Doetjes (1997: 129). While in (187a) *afwezig* means "not (physically) present", the same adjective in (187b) means "absent-minded". This reflects a difference between the stage-level and the individual-level interpretation of *afwezig*; *veel* patterns with the stage-level reading while *erg* teams up with the individual-level reading. Apart from showing that *veel* can degree-quantify adjectival predicates as well, the data in (187) once again confirm that *veel* has difficulty quantifying individual-level predicates.

- (187) a. Jan is veel afwezig.                            b. Jan is erg afwezig.  
           Jan is much absent                            Jan is very absent  
           'Jan is often absent.'                            'Jan is often absent-minded.'

There are two points that should be stressed in connection with the contrast between stage-level and individual-level predicates. The first concerns transitivity. The examples in (180b) and (184a), repeated below as (188), seem to differ in one syntactically significant respect only: they both involve individual-level predicates, but whereas *houden van* 'to like' selects a PP-complement, *vertrouwen* 'to trust' takes an NP-complement.

- (188) a. Hij houdt veel van reizen.  
           he likes much of travel  
           'He likes traveling a lot.'  
       b. \*Hij vertrouwt Marie veel.  
           he trusts Marie much



Apparently, the category of the complement of the individual-level verb matters when it comes to the adverbial use of *veel* as a degree-of-intensity quantifier. Data confirming this conclusion are provided in (189).

- (189) a. Hij hecht veel aan kwaliteit.    a'. \*Hij waardeert kwaliteit veel.  
           he attaches much to quality        he appreciates quality much  
       b. Hij vertrouwt veel op Marie.    b'. \*Hij vertrouwt Marie veel.  
           he trusts much on Marie        he trusts Marie much

The two primeless examples differ in that *veel* can readily receive the desired degree-of-intensity reading in (189a), whereas it instead receives a degree-of-frequency reading in (189b); in the latter example, the degree-of-intensity is more naturally expressed with the aid of adverbs like *erg/zeer* 'very'. Be that as it may, the fact that no reading is available for *veel* in the primed examples in (189) shows that the nature of the complement is an important factor when it comes to the distribution of adverbial *veel*: *veel* is impossible when the stage-level predicate takes a nominal complement.

It is, however, not the nature of the complement alone that regulates the adverbial distribution of *veel*; the individual-level/stage-level distinction is a crucial factor as well. This is evident from the fact that the transitive stage-level verbs in (190) are perfectly compatible with adverbial *veel*. These examples show not only that transitivity is not the crucial factor, but also that agentivity is not implicated in the dichotomy: the two examples in (190) differ with respect to agentivity but not in acceptability. That agentivity is not involved is also clear from the fact that the examples in (188b) and (190b) are both non-agentive but do contrast in acceptability.

- (190) a. Hij kust Marie veel.  
           he kisses Marie much  
       b. Dat zie je hier veel.  
           that see you here much  
           'One sees that a lot around here.'

### 6.3. Quantitative *er*

We conclude this chapter with a discussion of so-called quantitative *er*, which is exemplified in the examples in (191). These examples show that quantitative *er* is associated with an interpretative gap [*e*] contained within a noun phrase. The reason why we discuss quantitative *er* in this chapter on numerals and quantifiers is that it normally requires that some quantificational element be present: the noun phrase in the second conjunct of example (191a), for example, contains the cardinal numeral *drie* 'three' and the noun phrase in the second conjunct of example (191b) contains the quantifier *veel* 'many'.

- (191) a. Jan heeft twee boeken en Piet heeft er [drie [*e*]].  
           Jan has two books and Piet has ER three  
       b. Jan heeft weinig boeken maar Marie heeft er [veel [*e*]].  
           Jan has few books but Marie has ER many

This section will discuss a number of properties of constructions with quantitative *er*. Since some of these properties have been illustrated earlier in this chapter, the discussion will sometimes be relatively brief.

*I. The antecedent of the interpretative gap [e]*

An important condition on the occurrence of expletive *er* is that the gap in the associate noun phrase can be assigned an interpretation on the basis of information made available by the domain of discourse or the context. This is ensured in the examples in (191) by providing this information in the first conjunct of a coordinate structure, so that the interpretative gap [e] in (191) is construed as *boeken* 'books'; but in the examples below we will simply tacitly assume that this condition is met.

The examples in (192) show that, when the interpretative gap is interpreted on the basis of a previously mentioned noun phrase, the gap and its antecedent may exhibit a mismatch in number: in (192a) the antecedent is singular whereas the gap is plural, and in (192b) we are dealing with the reverse situation.

- (192) a. Jan heeft één boek en Piet heeft er [drie [e]].  
 Jan has one book and Piet has ER three  
 b. Jan heeft twee boeken en Piet heeft er [één [e]].  
 Jan has two books and Piet has ER one

The antecedent of the interpretative gap must be a count noun: example (191b) has shown that the quantifiers *veel* and *weinig* are compatible with quantitative *er* and example (193a) shows that these quantifiers can modify non-count nouns like *wijn* 'wine', but nevertheless example (193b) is excluded (although it has been reported that some Flemish varieties do allow examples of this sort).

- (193) a. Jan heeft veel/weinig wijn.  
 Jan has much/little wine  
 b. \*Jan heeft veel wijn maar Piet heeft er [weinig [e]].  
 Jan has much wine but Piet has ER little

In the examples discussed so far the antecedent of the gap corresponds to the head of a noun phrase. The antecedent can, however, also be a larger nominal projection; cf. Blom (1977). Example (194a), for instance, shows that complements of nouns must be omitted in the quantitative *er* construction; the example is ungrammatical when the complement clause *dat de maan om de aarde draait* is present. This shows that the antecedent is not just the head noun *bewijs* but the lexical projection *bewijs dat de aarde rond is*. Example (194b) shows that the same thing holds for attributively used adjectives: the example is ungrammatical when the attributive modifier *witte* 'white' is present.

- (194) a. Jan gaf [een bewijs dat de aarde rond is] en  
 Jan gave a proof that the earth round is and  
 Piet gaf er [drie [e] (\*dat de maan om de aarde draait)].  
 Piet gave ER three that the moon around the earth circles  
 b. Jan heeft [twee zwarte katten] en Marie heeft er [drie (\*witte) [e]].  
 Jan has two black cats and Marie has ER three white

Although attributive modifiers may not occur when quantitative *er* is present, the examples in (195) show that it is possible to have prepositional modifiers or relative clauses in such contexts.

- (195) a. Ik heb [twee poppen met blond haar] en  
 I have two dolls with fair hair and  
 Jan heeft er [drie [e] met donker haar].  
 Jan has ER three with dark hair
- b. Marie had [veel studenten die wilden meedoen], maar  
 Marie had many students who wanted join.in but  
 Els had er [veel [e] die weigerden].  
 Els had ER many who refused

We may therefore conclude from the examples in (194) and (195) that the interpretative gap [e] is a nominal constituent larger than a head but smaller than a full noun phrase.

## II. The quantification element

The examples above have already shown that the quantificational element is normally a cardinal number or a quantifier like *veel/weinig*, but other quantificational elements may also occur with quantitative *er*: example (196a), for instance, provides a binominal construction with the quantificational nouns *een paar* ‘a couple’ and *een boel* ‘a lot’, and (196a) provides an example with the quantificational element *genoeg* ‘enough’; see Section 4.1.1.3.4, sub I, and Section 6.2.4.2 for more examples of this sort.

- (196) a. Ik heb nog een paar/boel boeken. a'. Ik heb er nog een paar/boel.  
 I have still a couple/lot books I have ER still a couple/lot  
 ‘I still have a couple/lot of books.’ ‘I still have a couple of them.’
- b. Ik heb nog genoeg boeken. b'. Ik heb er nog genoeg.  
 I have still enough books I have ER still enough  
 ‘I still have enough books.’ ‘I still have enough of them.’

Although a quantificational element is present in the prototypical case, many (but not all) speakers also accept examples like (197b). Observe that the gap [e] in (197b) must be interpreted as plural; a singular interpretation requires that it be preceded by the numeral *één* ‘one’, as in (197b').

- (197) a. Ik heb nog een stoel/stoelen in de schuur staan.  
 I have still a chair in the barn stand  
 ‘I still have a chair/chairs in the barn.’
- b. <sup>%</sup>Ik heb ER nog [e] in de schuur staan. [plural only]
- b'. Ik heb ER nog [één [e]] in de schuur staan. [singular]

The presence of a numeral or quantifier is not sufficient to license the occurrence of quantitative *er*; there are several additional conditions that must be met. First, the associate noun phrase must be indefinite; (198a) shows that the definite counterpart of (191a) is unacceptable. Second, (198b) shows that strong quantifiers like *alle* are not compatible with quantitative *er*; see Section 6.2, sub II,

for more examples. Weak quantifiers, on the other hand, normally give rise to a fully acceptable result; see Sections 6.2.3.2 and 6.2.4.2 for ample illustration.

- (198) a. \*Jan heeft de twee boeken en Piet heeft er [de drie [e]].  
 Jan has the two books and Piet has ER the three  
 b. \*Jan heeft twee boeken van Gerard Reve en Piet heeft er [alle [e]].  
 Jan has two books by Gerard Reve and Piet has ER all

The examples in (199) suggest that quantitative *er* may also occur in tandem with the so-called *wat voor* construction. This is somewhat surprising, given that this construction is not a quantificational, but a type-denoting expression. The construction is somewhat special, however, in that it requires that the spurious article *een* be stressed, which is normally not possible in the *wat voor* construction.

- (199) a. Wat heeft Peter voor een/\*één auto?  
 what has Peter for a car  
 'What kind of car does Peter have?'  
 b. Wat heeft Peter er voor één/\*een [e]?  
 what has Peter ER for a  
 'What kind does Peter have?'

Furthermore, the primed examples in (200) show that the nominal gap in the *wat voor* construction must be singular, whereas it can readily be plural in the other examples discussed above. Note that (200a') is fully acceptable with *er* interpreted as quantitative *er*, but only when the interpretive gap is construed as singular; cf. (199b). The string *Wat koopt Els er voor?* is acceptable when *er* is construed as part of a discontinuous pronominal PP *er ...voor* 'for it', but this is irrelevant for our present discussion.

- (200) a. Wat koopt Els voor een boeken a'. #Wat koopt Els er voor één [e]?  
 what buys Els for a books what buys Els ER for a  
 'What kind of books does Els buy?'  
 b. Wat koopt Els voor boeken b'. \*Wat koopt Els er voor [e]  
 what buys Els for books what buys Els ER for  
 'What kind of books does Els buy?'

### III. The syntactic nature of the interpretative gap

This section will discuss the nature of the interpretative gap within the noun phrase that is associated with quantitative *er*. The three analyses in (201) come to mind and will be discussed in the next subsections.

- (201) a. The interpretative gap is the result of deletion:  $er \dots [Num/Q [\text{---}N]]$   
 b. The interpretative gap is base-generated as a pronominal element, which must be licensed/bound by quantitive *er*:  $er_i \dots [Num/Q [pro_i]]$   
 c. The interpretative gap is the result of movement:  $er_i \dots [Num/Q [t_i]]$

#### A. The interpretative gap is the result of deletion

A problem for a deletion analysis is that it does not explain why quantitative *er* must be present, given that example (153) in Section 6.2.4.1 has already shown that

N-ellipsis is possible without quantitative *er*; see also Section A5.4. In fact, the contrast between the two examples in (202) shows that quantitative *er* is blocked in N-ellipsis contexts; (202b) is only acceptable when *er* is assigned a locative interpretation. For this reason, we can immediately dismiss this analysis.

- (202) a. Hij heeft [<sub>DP</sub> een blauwe ~~auto~~] gekocht.  
           he has       a blue       car       bought  
           ‘He has bought a blue one(s).’  
       b. <sup>#</sup>Hij heeft er [<sub>DP</sub> een blauwe ~~auto~~] gekocht.

Barbiers (2009) has put forth a second argument against the deletion analysis. First observe that the examples in (203) show that elided nouns in N-ellipsis constructions maintain their gender and number features: the article *het* and the relative pronoun *dat* in (203a) show that the elided noun is neuter and singular; (203b) shows that changing the number of the elided noun (which is of course determined by the context) triggers changes in both the article and the relative pronoun.

- (203) a. Jan heeft [<sub>het</sub><sub>neuter,sg</sub> blauwe ~~boek~~<sub>neuter,sg</sub>] <sub>dat</sub><sub>neuter,sg</sub> Peter wil hebben.  
           Jan has   the       blue   book       which   Peter wants have  
       b. Jan heeft [<sub>de</sub><sub>pl</sub> blauwe ~~boeken~~<sub>neuter,pl</sub>] <sub>die</sub><sub>neuter,pl</sub> Peter wil hebben.  
           Jan has   the   blue   books       which   Peter wants have

Barbiers claims that speakers of the northern varieties of Dutch fail to make a similar distinction in constructions with quantitative *er*: the (a)-examples in (204) show that such speakers can use the relative pronoun *die* both when the interpretive gap is interpreted as *huis* ‘house’, which is neuter in Dutch, and when it is interpreted as *auto* ‘car’, which is non-neuter. Note that we have placed *Northern* between quotation marks to indicate that some of our northern informants have the southern judgments, which suggests that the stratification of the distinction is in need of further research.

- (204) a. Jan heeft er [één ~~huis~~] *die* je gezien moet hebben. [“Northern” speakers]  
           Jan has   ER   one house which you seen must have  
       a’. Jan heeft er [één ~~auto~~] *die* je gezien moet hebben.  
       b. Jan heeft er [één ~~huis~~] *dat* je gezien moet hebben. [Southern speakers]  
           Jan has   ER   one house which you seen must have  
       b’. Jan heeft er [één ~~auto~~] *die* je gezien moet hebben.

#### *B. The interpretative gap is base-generated as a pronominal element*

According to this analysis, proposed in Kester (1996), the presence of quantitative *er* is required to license some phonetically empty, base-generated pronominal-like element *pro*:  $er_i \dots [\text{Num/Q } [\text{pro}_i]]$ . When we assume that the licensing relation involves  $^o$ binding, the analysis can be used to account for at least some of the basic properties of the relation between quantitative *er* and its nominal associate. For example, given that binding requires that the binder c-command the pronominal element, we correctly predict that *er* must precede its associate noun phrase (when they are situated in the middle field of the clause).

- (205) a. Jan heeft  $er_i$  [één [  $pro_i$  ]] meegenomen.  
 Jan has ER one with-taken  
 'Jan has taken one of them with him.'  
 b. \*Jan heeft [één [  $pro_i$  ]]  $er_i$  meegenomen.

Example (206a) further shows that the noun phrase can be placed in clause-initial position, and this also follows under the present analysis, given that the same thing is possible in the case of reflexive pronouns; the topicalized phrase is "reconstructed" into its original position (indicated by the trace  $t_j$ ) as far as its binding properties are concerned.

- (206) a. [Één [  $pro_i$  ]]  $j$  heeft Jan  $er_i$   $t_j$  meegenomen.  
 one has Jan ER with-taken  
 b. [Voor zichzelf  $i_j$ ] heeft Jan  $t_i$  een boek  $t_j$  gekocht.  
 for himself has Jan a book bought  
 'John bought a book for himself.'

Finally, when we assume that the binding relation between quantitative *er* and its nominal associate is local in the same sense as the binding relation between a reflexive pronoun and its antecedent, we also correctly predict that *er* and its nominal associate must be part of the same clause: example (207) shows that placing *er* in some higher clause leads to ungrammaticality.

- (207) Jan vertelde <\* $er_i$ > mij dat hij < $er_i$ > [één [  $pro_i$  ]] meegenomen had  
 Jan told ER me that he one with-taken had  
 'Jan told me that he had taken one of them with him.'

Despite this descriptive success, the suggested analysis has at least two flaws. First, it is not clear why the antecedent of *pro* must be *er* and cannot be some more meaningful element that could also identify the semantic content of *pro*. Second, it is not clear how quantitative *er* itself is licensed; normally all elements in the clause are licensed by being in a selection or modification relation with some other elements in the clause, but this does not seem to hold for *er*, as it neither seems to be assigned a thematic role nor to have an obvious modification function.

### C. The interpretative gap is the result of movement

The two problems mentioned for the previous analysis are immediately solved in the movement analysis, as proposed by Coppen (1991) and Barbiers (2009), where quantitative *er* is claimed to pronominalize a certain part of the nominal structure. This means that *er* is base-generated as part of the noun phrase and subsequently moved into some NP-external position:  $er_i$  ... [Num/Q [  $t_i$  ]]. That the movement is obligatory can be attributed to the more general properties of discourse linked pronouns: the examples in (208), for example, show that definite pronouns like 'm are obligatorily scrambled to the left of °clause adverbs like *waarschijnlijk* 'probably'. See Section 8.1.3 for more discussion.

- (208) a. Jan heeft waarschijnlijk die blauwe auto/\*'m gekocht.  
 Jan has probably that blue car/him bought  
 'Jan has probably bought the blue car/it.'  
 b. Jan heeft die blauwe auto/'m waarschijnlijk gekocht.

The movement analysis also accounts for the fact that quantitative *er* normally precedes the noun phrase it is associated with: given that *er* is extracted from the noun phrase, the unacceptability of example (209b) is simply the result of °freezing, the fact that a phrase from which some element is extracted is frozen in place.

- (209) a. Jan heeft  $er_i$  [één [ $t_i$ ]] meegenomen.  
 Jan has ER one with-taken  
 'Jan has taken one of them with him.'  
 b. \*Jan heeft [één [ $t_i$ ]] $_j$   $er_i$   $t_j$  meegenomen.

Of course, some proviso must be made for the observation that in (206) topicalization of the remnant of the noun phrase is possible, by taking recourse to some notion of reconstruction. The clause-boundedness of the relation between quantitative *er* and its nominal associate, illustrated in (207), follows from the fact that scrambling is likewise clause-bound.

The claim that quantitative *er* is pronominal and thus has referential properties is supported by the examples in (210). Example (210a) simply shows that quantitative *er* associated with a direct object can readily precede an indefinite indirect object. Example (210b) shows that this is not possible when the indirect object contains a noun phrase that denotes the same entities as the quantified noun phrase; cf. Coppen (1991). This would immediately follow from °binding condition C if *er* is co-referential with (that is, binds) the referential noun phrase embedded in the indirect object. The ungrammaticality of (210b) thus supports the claim that quantitative *er* is referential.

- (210) a. Hij vertelde  $er_i$  iemand [drie [ $t_i$ ]].  
 he told ER someone three  
 'He told three [= jokes] to someone.'  
 b. \*Hij vertelde  $er_i$  iemand die geen grap $_i$  kan waarderen [drie [ $t_i$ ]].  
 he told ER someone who no joke can appreciate three  
 Intended reading: 'He told three jokes to someone who cannot appreciate a joke.'

A powerful argument in favor of the movement analysis is that the restrictions on the relation between quantitative *er* and its nominal associate resemble those between a moved element and its trace. First, the examples in (211b&c) show that quantitative *er* cannot be associated with a single noun phrase in a coordinate structure, whereas (211d) shows that it can occur when it is associated with both noun phrases. Similar facts have been described for movement; cf. °Coordinate Structure Constraint and °Across-the-Board movement.

- (211) a. Jan heeft [[twee postzegels uit Thailand] en [drie postzegels uit China]].  
 Jan has two stamps from Thailand and three stamps from China  
 b. \*Jan heeft  $er_i$  [[twee postzegels uit Thailand] en [drie [ $t_i$ ] uit China]].  
 Jan has ER two stamps from Thailand and three from China  
 c. \*Jan heeft  $er_i$  [[twee [ $t_i$ ] uit Thailand] en [drie postzegels uit China]].  
 Jan has ER two from Thailand and three stamps from China  
 d. Jan heeft  $er_i$  [[twee [ $t_i$ ] uit Thailand] en [drie [ $t_i$ ] uit China]].  
 Jan has ER two from Thailand and three from China

Second, the relation between quantitative *er* and its nominal associate seems to be sensitive to the same °islands for extraction. Consider the examples in (212) and assume that °R-extraction involves movement of an R-word from the complement position of the PP. These examples show that R-extraction is possible from complement-PPs but not from time adverbials.

- (212) a. Ik heb lang over mijn ontslag gepiekerd.  
 I have long about my dismissal worried  
 'I have worried long about my dismissal.'
- a'. Ik heb  $er_i$  lang [over [  $t_i$  ]] gepiekerd.  
 I have there long about worried  
 'I have worried long about it.'
- b. Ik heb dat boek tijdens mijn vakantie gelezen.  
 I have that book during my vacation read  
 'I have read that book during my vacation.'
- b'. \*Ik heb dat boek  $er_j$  [tijdens [  $t_i$  ]] gelezen.  
 I have that book there during read  
 Intended reading: 'I have read that book during it.'

The examples in (213) show that we find the same with quantitative *er*; *er* can be associated with a noun phrase in a complement-PP but not in a time adverbial.

- (213) a. Ik heb lang over twee problemen gepiekerd.  
 I have long about two problems worried  
 'I have worried long about two problems.'
- a'. Ik heb  $er_i$  lang [over [twee [  $t_i$  ]]] gepiekerd.  
 I have ER long about two worried
- b. Ik heb dat boek tijdens twee vergaderingen gelezen.  
 I have that book during two meetings read  
 'I have read that book during two meetings.'
- b'. \*Ik heb dat boek  $er_i$  [tijdens [twee [  $t_i$  ]]] gelezen.  
 I have that book ER during two read

The examples in (214) further show that both R-extraction and the association of quantitative *er* require that the complement-PP precede the verb in clause-final position. Note that *Ik heb er lang gepiekerd over twee* is perhaps marginally acceptable with a locational reading of *er*, but this is of course irrelevant for our present discussion.

- (214) a. \*Ik heb  $er_i$  lang gepiekerd [over [  $t_i$  ]].  
 I have there long worried about
- b. \*Ik heb  $er_i$  lang gepiekerd [over [twee [  $t_i$  ]]].  
 I have ER long worried about two

The discussion above has shown that the movement analysis has much to commend itself, but it must be noted that there are also problems. The most important one is related to example (213a'), which presupposes that quantitative *er* can be extracted from the complement of a PP. There are reasons to assume,



however, that this is normally not possible. First, consider the examples in (215), which just intend to show that R-extraction is possible from the *voor*-PP.

- (215) a. Dat brood is toch voor de lunch bedoeld.  
           that bread is PRT for lunch intended  
           ‘That bread is intended for lunch, isn’t it?’  
       b. Dat brood is er<sub>i</sub> toch [voor [ *t<sub>i</sub>* ]] bedoeld.  
           that bread is there PRT for intended  
           ‘That bread is intended for it, isn’t it?’

Now consider example (216a), which differs from (215a) in that the preposition *voor* takes the PP-complement *bij the koffie* instead of the nominal phrase *de lunch*. Example (216b) shows that R-extraction from the *voor*-PP is not possible.

- (216) a. Die koekjes zijn toch voor bij de koffie bedoeld.  
           those cookies are PRT for with the coffee intended  
           ‘Those cookies are intended to be eaten with the coffee, aren’t they?’  
       b. \*Die koekjes zijn er<sub>i</sub> [voor [bij [ *t<sub>i</sub>* ]]] bedoeld.  
           those cookies are there for with intended

Note that R-extraction from the *voor*-PP gives rise to a configuration similar to the one proposed for the quantitative *er* construction in (214b) in the sense that a moved element is related to a trace within a complement of a preposition. The difference in acceptability of (216b) and (213a’) therefore raises some doubt on the movement analysis of quantitative *er*, unless it can be reduced to some independent reason. One solution that comes immediately to mind is that the ungrammaticality of (216b) is due to the fact that the embedded *bij*-phrase is an island for extraction, but this is clearly not the case given that example (217) shows that R-extraction from the *bij*-phrase is possible as long as the R-word remains within the *voor*-PP. Since we have no further insights to offer here, we will leave this problem for future research.

- (217) Die koekjes zijn [voor er<sub>i</sub> [bij [ *t<sub>i</sub>* ]]] bedoeld.  
           those cookies are for there with intended

#### 6.4. Bibliographical notes

Most of the work on quantification has been carried out in formal semantics. Bach et al. (1995), for instance, presents a large number of studies on quantification in various languages, including Dutch. Other discussions of Dutch quantifiers include Doetjes (1997) on the distribution of quantifying expressions in French, Dutch and English; Zwarts (1992; chapter 7) on quantified determiners in Dutch; De Jong (1991) on the distribution of Dutch determiners (articles, numerals and quantifiers); and De Jong (1983) on the distribution of Dutch numerals.

The distinction between weak and strong determiners was first made by Milsark (1974, 1977) in a number of studies on the English existential construction and the definiteness effect. For more extensive discussions of the expletive construction and the definiteness effect in English and Dutch see Reuland (1983), Bennis (1986) and the papers collected in Reuland & Ter Meulen (1989). Other relevant discussions can be found in Diesing (1992); De Hoop (1995), who deals with the weak-strong

distinction in Dutch; and De Swart (2001), who discusses the weak readings of indefinites. A recent, comprehensive review of the literature on the English expletive construction and the definiteness effect can be found in Hartmann (2008).

Since the 1980s much of the research on quantification has been carried out within the theory of generalized quantifiers, as developed by Barwise and Cooper (1981). For a general introduction, see, e.g., Partee et al. (1990; ch.14). For more detailed discussions, see such collections as Van Benthem & Ter Meulen (1985), Groenendijk et al. (1987) and Gärdenfors (1987).

Some important studies on quantitative *er* are Bech (1952), Blom (1977), Bennis (1986), Coppen (1991) and Barbiers (1990/2009). The arguments in favor of the movement analysis of quantitative *er* are taken from the last two references; Barbiers (2009) further provides an explicit comparison of quantitative *er* with the referential personal pronoun *ze* 'they', and shows that, although the former pronominalizes a smaller portion of the noun phrase than the latter, there are several similarities between the two.



# Chapter 7 Pre-determiners

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## Introduction

This chapter will focus on the pre-determiners *al* ‘all’ and *heel* ‘all/whole’ as shown in the primeless examples of (1). They will be discussed in relation to their “inflected” counterparts *alle* and *hele* in the nearly equivalent constructions shown in the primed examples.

- (1) a. Al de boeken zijn verkocht.      a'. Alle boeken zijn verkocht.  
       all the books have.been sold        all books have.been sold  
       ‘All books are sold.’                ‘All books are sold.’  
       b. Ze kletsen heel de dag              b'. Ze kletsen de hele dag.  
       they chatter whole the day        they chatter the whole day  
       ‘They chatter all day.’              ‘They chatter all day.’

Before discussing *al* and *heel* in detail, we will give a very brief indication of some similarities and differences between these two pre-determiners. The two (and their alternants in the primed examples of (1)) have in common that, in a somewhat extended sense, they act as universal quantifiers. One property of universal quantifiers is that they can be modified by approximative modifiers like *bijna* ‘nearly’ and *vrijwel* ‘virtually’. This is illustrated in (2) for the universal quantifier *alles* ‘everything’, and the negative existential quantifier *niets*, which can be also be represented as a universal quantifier followed by negation; cf. the equivalence rule  $\neg \exists x \varphi \leftrightarrow \forall x \neg \varphi$ .

- (2) a. Jan heeft bijna/vrijwel alles verkocht.  
       Jan has nearly/virtually everything sold  
       b. Jan heeft bijna/vrijwel niets verkocht.  
       Jan has nearly/virtually nothing sold

The primeless examples in (3) show that the pre-determiners *al* and *heel* have the same modification possibilities, and in the primed examples we give similar examples for inflected *alle* and *hele*. There are some subtle meaning differences between the two sets of examples. Example (3a), for example, refers to a contextually determined set of books, whereas (3a') may also refer to the set of books in the speaker's conception of the universe, that is, to all existing books. Example (3b) refers to the parts that make up a house (living, bedrooms, kitchen, bathroom, attic, etc.), whereas (3b') may also refer to the house as a unit, e.g., the house as seen from the exterior.

- (3) a. Jan heeft bijna/vrijwel al de boeken gelezen.  
       Jan has nearly/virtually all the books read  
       a'. Jan heeft bijna/vrijwel alle boeken gelezen.  
       Jan has nearly/virtually all books read  
       b. Jan heeft bijna/vrijwel heel het huis schoongemaakt.  
       Jan has nearly/virtually whole the house clean.made  
       b'. Jan heeft bijna/vrijwel het hele huis schoongemaakt.  
       Jan has nearly/virtually the whole house clean.made

That *al* ‘all’ is a universal quantifier is of course also clear from its meaning: in terms of Figure 1 from Section 1.1.2.2.1, it indicates that all members in denotation set A of the noun phrase are properly included in denotation set B of the verb phrase, that is, that  $A - (A \cap B) = \emptyset$ ; cf. the discussion in Section 6.2.1.

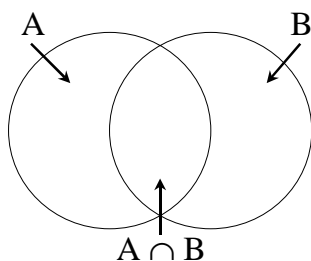


Figure 1: Set-theoretic representation of the subject-predicate relation

The semantics of *heel*, which will be discussed more extensively in Section 7.2.1, is somewhat different; as was already mentioned, the noun phrase in (3b) refers to the parts that make up the house in question, and the pre-determiner *heel* indicates that the predicate *schoonmaken* applies to all parts of this house. Now if we take set A in Figure 1 to refer to the relevant parts of the house, it will be clear that *heel* also expresses that  $A - (A \cap B) = \emptyset$ .

Related to the fact that *al* and *heel* quantify over a different kind of set is that the two pre-determiners are generally in complementary distribution, which we will illustrate here for count nouns: since the pre-determiner *al* quantifies over a set of entities with a cardinality higher than one, the head noun of the noun phrase it quantifies is normally plural; since the pre-determiner *heel* quantifies over the parts of some entity, the head noun of the noun phrase it modifies is typically singular.

- (4) a. Jan heeft al de koeken/\*koek opgegeten.  
       Jan has all the cookies/cookie prt.-eaten  
       b. Jan heeft heel de taart/\*taarten opgegeten.  
       Jan has whole the cake/cakes prt.-eaten

With the brief discussion above, we have set the stage for the more exhaustive discussion of *al* and *heel* in, respectively, Section 7.1 and Section 7.2. We will conclude in Section 7.3 with a brief note on focus particles, which may also occur in pre-determiner position.

### 7.1. The universal quantifier *al* ‘all’ and its alternants

This section is mainly concerned with the syntax and semantics of the universal quantifier *al* ‘all’ and its alternant *alle* in (5): we will refer to the former as PRE-DETERMINER BARE AL because it always precedes a definite determiner and never has the “inflectional” schwa ending; the latter will be called INFLECTED ALLE.

- |     |                                       |                                      |
|-----|---------------------------------------|--------------------------------------|
| (5) | • Pre-determiner bare <i>al</i>       | • Inflected <i>alle</i>              |
| a.  | <i>al de mensen</i><br>all the people | a'. <i>alle mensen</i><br>all people |
| b.  | <i>al de boeken</i><br>all the books  | b'. <i>alle boeken</i><br>all books  |

Section 7.1.1 will start with an overview of the semantic properties of noun phrases containing *al* and *alle*, which is followed in 7.1.2 and 7.1.3 by a discussion of, respectively, their syntactic behavior and syntactic distribution. Section 7.1.4 discusses the independent uses of *al/alle* as, e.g., a pronominal °argument or a °floating quantifier; some examples of these uses are given in (6). Section 7.1.5 concludes with a discussion of the somewhat special form *allemaal*.

- |     |                                                   |                                                                                    |
|-----|---------------------------------------------------|------------------------------------------------------------------------------------|
| (6) | • Pronominal quantifier <i>allen/alles</i>        | • Floating quantifier <i>alle(n)</i>                                               |
| a.  | <i>Allen zijn uitgenodigd.</i><br>all are invited | a'. <i>Die mensen zijn allen uitgenodigd.</i><br>those people are all prt.-invited |
| b.  | <i>Alles is uitverkocht.</i><br>all is sold.out   | b'. <i>Die boeken zijn alle uitverkocht.</i><br>those books are all sold.out       |

### 7.1.1. Semantics of *al* and *alle* 'all'

This section discusses the meaning contribution of *al/alle* 'all'. Subsection I will show that the core semantics involves universal quantification. Since the core semantics of pre-determiner bare *al* and inflected *alle* is the same, it has been suggested by, e.g., Verkuyl (1981), Paardekooper (1986), De Jong (1991), Coppen (1991), and Haeseryn et al. (1997) that *alle* is actually a "fused" form of pre-determiner bare *al* and the definite determiner; see Perridon (1997) for an opposing view. Under this view the invariant schwa ending on *alle* could be seen as the remaining part of the definite article *de* after its "fusion" with *al*. This approach to the final schwa of *alle* does not carry over, however, to attested cases with singular neuter nouns like *alle geknoei*, given that the neuter definite article *het*, with which *al* has putatively fused, does not end in a schwa. Subsections II and III will provide more arguments against the "fusion" approach to inflected *alle*: these subsections discuss, respectively, the specific and generic uses of *al/alle* and the fact that *alle*, but not *al*, can be used to express high degree quantification. Subsection IV concludes by showing that the universal and the high degree quantifiers differ in that noun phrases modified by the former are strong whereas noun phrases modified by the latter quantifier are weak.

#### I. Core semantics: universal quantification

As was discussed in the introduction to this chapter, the core meaning of *al/alle* involves universal quantification: it indicates that all members of the denotation set of the noun phrase are part of the denotation set of the predicate. When combined with count nouns, *al/alle* applies to SETS, not to STRUCTURED UNITS. The difference between these two notions can be clarified by means of the pairs in (7). While, at a certain level of abstraction, the noun phrases *de bomen* 'the trees' and *het bos* 'the forest' can refer to the same entity in the extra-linguistic universe, they are linguistically distinct in that the former refers to a set of entities while the latter



refers to a unit, which is structured in the sense that it happens to consist of a set of entities. The primeless examples in (7) show that *al/alle* can be used in noun phrases that refer to sets but not in noun phrases that refer to structured units. The primed examples show that *al* is fundamentally different in this regard from the pre-determiner *heel* 'all/whole': cf. Section 7.2.1.1 for more discussion.

- |     |    |                    |     |                  |
|-----|----|--------------------|-----|------------------|
| (7) | a. | al de/alle bomen   | a'. | *heel de bomen   |
|     |    | all the/all trees  |     | whole the trees  |
|     | b. | *al het/alle bos   | b'. | heel het bos     |
|     |    | all the/all forest |     | whole the forest |

*Al/alle* can also precede non-count nouns. This holds both for concrete, substance nouns like *wijn* 'wine' and for abstract, psychological predicates like *ellende* 'sorrow'. In these cases *al* indicates that the full contextually determined quantity of the entity denoted by the noun is intended.

- |     |    |                    |
|-----|----|--------------------|
| (8) | a. | al de/alle wijn    |
|     |    | all the/all wine   |
|     | b. | al de/alle ellende |
|     |    | all the/all sorrow |

## II. Specificity/genericity

An important difference between pre-determiner bare *al* and inflected *alle* concerns the generic interpretations of noun phrases. It comes to the fore most clearly with nouns like *zebra* that may refer to a species. As is discussed in 5.1.1.5, a bare plural like *zebra's* in (9a) can have either a non-generic reading, in which case it refers to a certain set of zebras, or a generic reading, in which case it refers to typical members of the species. A definite noun phrase like *de zebra's*, on the other hand, can normally only be used in specific statements; (9b) is ungrammatical as a generic statement about zebras and, since zebras happen to all be striped, it is also awkward as a statement about a specific set of zebras.

- |     |    |                             |
|-----|----|-----------------------------|
| (9) | a. | Zebra's zijn gestreept.     |
|     |    | zebras are striped          |
|     | b. | *De zebra's zijn gestreept. |
|     |    | the zebras are striped      |

When we now turn to examples featuring the universal quantifiers *alle* and *al*, we find that noun phrases involving inflected *alle* behave like bare plurals, and that noun phrases involving pre-determiner bare *al* behave like definite noun phrases. That is, the universally quantified noun phrase *alle zebra's* in (10) is ambiguous between a specific and a generic interpretation, whereas the noun phrase *al de zebra's* in (11) normally has a specific reading.

- |      |    |                                           |            |
|------|----|-------------------------------------------|------------|
| (10) | a. | Alle zebra's kwamen plotseling op ons af. | [specific] |
|      |    | all zebras came suddenly at us prt.       |            |
|      | b. | Alle zebra's zijn gestreept.              | [generic]  |
|      |    | all zebras are striped                    |            |

- (11) a. Al de zebra's kwamen plotseling op ons af. [specific]  
 all the zebras came suddenly at us prt.  
 'All the zebras suddenly came running towards us.'
- b. #Al de zebra's zijn gestreept. [generic]  
 all the zebras are striped

Another way to describe these data is by saying that the noun phrase *alle zebra's* can be used either to refer to the set of zebras in the domain of discourse (domain D), or simply to all zebras in the speaker's conception of the universe. The noun phrase *al de zebra's*, on the other hand, can only be used to refer to the zebras in domain D. This means that the meaning of this noun phrase is strictly compositional: the noun phrase *de zebra's* refers to the zebras in domain D and the pre-determiner *al* emphasizes that literally all the entities in domain D that satisfy the description of the NP *zebra's* are included in the set referred to by the definite noun phrase. The fact that *alle* and *al de* differ in this way suggests that a "fusion" approach to *alle*, according to which *alle* is a contracted form of the pre-determiner *al* and the definite determiner, cannot be upheld.

### III. High degree quantification

That a fusion "approach" to *alle* is not feasible is also suggested by the fact that *alle*, but not *al de*, can be used to express high degree quantification. Examples of this use are given in (12): that the semantic contribution of *alle* in (12a) is not universal quantification but degree modification is clear from the fact that *alle tijd* does not mean "all time(s)" but "lots of time". This example also shows that the pre-determiner *al* cannot be used in this way. Other examples of the same type are given in (12b&c). Note in passing, that using *all* in the English translation of (12a) is impossible (although it does occur in the translation of the saying *Ik heb alle tijd in de wereld* 'I have all the time in the world'); examples (12b&c), however, can be rendered in English with the aid of the quantifier *every*.

- (12) a. Ik heb alle/\*al de tijd.  
 I have all/all the time  
 'I have lots of time.'
- b. Er is alle/\*al de reden tot klagen.  
 there is all/all the reason to complaining  
 'There is every reason to complain.'
- c. Er was alle/\*al de gelegenheid tot het stellen van vragen.  
 there was all/all the opportunity to the posing of questions  
 'There was every opportunity to ask questions.'

The high degree reading is frequently found in noun phrases with *alle* headed by abstract non-count nouns, especially when these noun phrases are embedded in PPs headed by *in* 'in' or *voor* 'for'. Some examples are given in (13). Note that the semantics of *in alle eerlijkheid/redelijkheid* in (13a) is accurately rendered in English with the aid of *all* (*in all honesty/fairness*), which suggests that high degree quantification is possible with English *all* as well. Dutch uses *alle* in this high degree meaning rather more profusely than English, though.

- (13) a. in alle helderheid/eerlijkheid/redelijkheid/rust  
           in all clarity/honesty/fairness/rest  
       b. voor alle duidelijkheid/zekerheid  
           for all clarity/security

#### IV. Weak and strong quantifiers

Noun phrases quantified by high-degree *alle* in (12) behave like °weak noun phrases in the sense of Section 6.2.1, sub II: as a subject they typically appear in °expletive *er* constructions like (12b&c), and they may also occur as the object in existential possessive sentences like (12a). In this respect, these noun phrases are fundamentally different from the noun phrases headed by the universal quantifier *alle*, discussed in sub I, which is a strong quantifier: the examples in (14) show that a noun phrase modified by the universal quantifier *alle* cannot occur in the expletive *er* construction.

- (14) a. Alle/\*Ø mannen zijn in de kamer.  
           all/Ø men are in the room  
       b. Er zijn Ø/\*alle mannen in de kamer.  
           there are Ø/all men in the room

A similar argument cannot be reproduced for the pre-determiner *al* given that it never combines with bare plurals (cf. Section 7.1.2.1); the contrast between the examples in (15) can therefore be attributed to the presence of the definite article. Nevertheless, the fact that Subsection I has shown that *al* expresses universal quantification combined with the fact that universal quantifier *alle* is strong makes it reasonable to assume that pre-determiner bare *al* is also a strong quantifier, although the point is difficult to prove.

- (15) a. (Al) de mannen zijn in de kamer.  
           all the men are in the room  
       b. \*Er zijn (al) de mannen in de kamer.  
           there are all the men in the room

#### 7.1.2. Distribution of *al* and *alle* inside the noun phrase

This section will discuss the restrictions on the use of the quantifiers *al* and *alle* within the noun phrase. We will focus on the types of nouns that license the presence of these quantifiers and the co-occurrence restrictions of the quantifier and other determiners.

##### 7.1.2.1. Pre-determiner bare *al* 'all'

This section presents a survey of the distribution of pre-determiner bare *al* inside the noun phrase. Subsection I will first discuss the noun phrase types that may contain this pre-determiner. This is followed in Subsection II by a discussion of the restrictions *al* imposes on other elements within the noun phrase.

### I. Bare *al* and noun phrase types

Pre-determiner bare *al* cannot occur in singular count noun phrases, regardless of the grammatical gender of the noun, but does readily occur in plural noun phrases headed by definite determiners like the plural article *de* ‘the’, the plural demonstratives *die/deze* ‘these/those’ and the definite possessive pronouns; see Subsection II for a discussion of bare plurals.

Table 1: Pre-determiner bare *al* in noun phrases headed by a count noun

|                        | SINGULAR [±NEUTER]                                         | PLURAL [±NEUTER]                                       |
|------------------------|------------------------------------------------------------|--------------------------------------------------------|
| DEFINITE ARTICLES      | * <i>al de stad/het huis</i><br>all the town/the house     | <i>al de steden/huizen</i><br>all the towns/houses     |
| DEMONSTRATIVE PRONOUNS | * <i>al die stad/dat huis</i><br>all that town/that house  | <i>al die steden/huizen</i><br>all those towns/houses  |
|                        | * <i>al deze stad/dit huis</i><br>all this town/this house | <i>al deze steden/huizen</i><br>all these towns/houses |
| POSSESSIVE PRONOUNS    | * <i>al mijn stad /huis</i><br>all my town/house           | <i>al mijn steden/huizen</i><br>all my towns/houses    |

In passing note that in older stages of the language, pre-determiner *al* could modify singular nouns; cf. *Woordenboek der Nederlandsche Taal*, lemma *al*. Some relics can still be found in Van Dale’s dictionary of Dutch: *al de stad* ‘the whole city’, *al de vloot* ‘the whole fleet’ and *al de wereld* ‘the whole world’, but in present-day Dutch *heel* ‘all/whole’ is normally used in this context; cf. Section 7.2.2.1, sub I.

Although pre-determiner bare *al* normally precedes plural noun phrases, it cannot be combined with pluralia tantum like (16a), or with formal plurals like (16b-d) that denote a conventionally fixed unit. Note that (16d) can be used when the individual islands of the Antillean archipelago are quantified by *al*, not on the intended reading in which the Antilles is seen as a unit. Section 7.2.2.1, sub I, will show that in this respect *al* is the exact opposite of the pre-determiner *heel*.

- (16) a. \**al de hersenen/tropen*  
all the brains/tropics  
b. \**al de kerstdagen* (zat hij te zeuren)  
all the Christmas days sat he to nag  
c. \**al de Verenigde Staten*  
all the United States  
d. #*al de Antillen*  
all the Antilles  
‘all the individual islands of the Antilles’

Pre-determiner bare *al* also occurs in non-count noun phrases, in a position linearly preceding the definite article, the demonstrative or the possessive pronoun. Substance nouns and mass nouns behave the same way, as the examples in Table 2 show. Note that the judgments are not affected by the gender of the noun. This is only shown for the substance nouns.

Table 2: Pre-determiner bare *al* in noun phrases headed by a non-count noun

|                        | SUBSTANCE NOUNS [±NEUTER]                                            | MASS NOUNS                                         |
|------------------------|----------------------------------------------------------------------|----------------------------------------------------|
| DEFINITE ARTICLES      | <sup>(?)</sup> <i>al de wijn/het water</i><br>all the wine/the water | <sup>(?)</sup> <i>al het vee</i><br>all the cattle |
| DEMONSTRATIVE PRONOUNS | <i>al die wijn/dat water</i><br>all that wine/that water             | <i>al dat vee</i><br>all that cattle               |
|                        | <i>al deze wijn/dit water</i><br>all this wine/this water            | <i>al dit vee</i><br>all this cattle               |
| POSSESSIVE PRONOUNS    | <i>al mijn wijn/water</i><br>all my wine/water                       | <i>al mijn vee</i><br>all my cattle                |

The examples in (17) show that pre-determiner bare *al* can also be used with abstract nouns like *ellende* ‘misery/trouble’ and *verdriet* ‘sorrow’.

- (17) a. *al* <sup>(?)</sup>*de/die/deze/zijn ellende*  
all the/that/this/his misery  
b. *al* <sup>(?)</sup>*het/die/deze/zijn verdriet*  
all the/that/this/his sorrow

The examples with the definite articles *de/het* given above are somewhat marked, but become perfectly acceptable when the noun phrase contains a restrictive modifier: cf. the examples in (18). A similar modifier effect does not show up in the other examples in Table 2, or, for that matter, in the examples to follow.

- (18) a. *al de rode wijn*  
all the red wine  
b. *al het vee in de stal*  
‘all the cattle in the stable’  
c. *al de ellende die ik heb meegemaakt*  
all the misery that I have prt.-made  
‘all the misery that I have been through’

Pre-determiner bare *al* can also precede projections of deverbal nouns of the type in Table 3. These bare stem, infinitival and GE-nominalizations are systematically [+NEUTER].

Table 3: Pre-determiner bare *al* in noun phrases headed by a deverbal noun

|                        | BARE STEM                           | INF-NOMINALIZATION                                     | GE-NOMINALIZATION                        |
|------------------------|-------------------------------------|--------------------------------------------------------|------------------------------------------|
| DEFINITE ARTICLES      | <i>al het werk</i><br>all the work  | <i>al het werken</i><br>all the working                | <i>al het gewerk</i><br>all the working  |
| DEMONSTRATIVE PRONOUNS | <i>al dat werk</i><br>all that work | <i>al dat werken</i><br>all that working               | <i>al dat gewerk</i><br>all that working |
|                        | <i>al dit werk</i><br>all this work | <i>al dit werken</i><br>all this working               | <i>al dit gewerk</i><br>all this working |
| POSSESSIVE PRONOUNS    | <i>al mijn werk</i><br>all my work  | <sup>(?)</sup> <i>al mijn werken</i><br>all my working | <i>al mijn gewerk</i><br>all my working  |

It is impossible, however, for *al* to be construed with result nominalizations instantiated by non-neuter nouns like *aankomst* 'arrival' or *aanvang* 'beginning', or neuter nouns like *begin* 'beginning' or *vertrek* 'departure'.

- |      |                                                         |                                                           |
|------|---------------------------------------------------------|-----------------------------------------------------------|
| (19) | • [-NEUTER]                                             | • [+NEUTER]                                               |
| a.   | *al de aanvang/aankomst<br>all the beginning/arrival    | a'. *al het begin/vertrek<br>all the beginning/departure  |
| b.   | *al die aanvang/aankomst<br>all that beginning/arrival  | b'. *al dat begin/vertrek<br>all that beginning/departure |
| c.   | *al deze aanvang/aankomst<br>all this beginning/arrival | c'. *al dit begin/vertrek<br>all this beginning/departure |

It is difficult to sharply distinguish the set of deverbal nouns that do not allow pre-determiner bare *al* from those that do. The unacceptability of the examples in (19) might be related to the fact that they all involve result nominals that denote a punctual event, that is, an event without a temporal extension. This tallies with the fact that pre-determiner bare *al* cannot be used with punctual non-deverbal nouns like *einde* 'end' in (20) either.

- (20) \*al het/dat/dit einde  
all the/that/this end

We add, however, that the context may force an eventive interpretation upon nouns of the type in (19) and (20), but the examples in (21) show that it is nonetheless impossible to use the pre-determiner *al* in such cases; Section 7.2.2.1, sub I, will show that in contexts like these, the pre-determiner *heel* 'all/whole' is used.

- (21) a. (\*Al) het begin van de film was erg saai.  
all the beginning of the movie was very boring  
b. (\*Al) het einde van de film was erg saai.  
all the end of the movie was very boring

## II. Restrictions on accompanying determiners and quantificational elements

This section investigates the restrictions that the pre-determiner *al* poses on the presence of determiners and quantificational elements. As an initial observation, note that the syntax of the constituents following *al* largely mirrors that of the same constituents lacking *al*: (22), for instance, shows that adjectival modification of the noun is not affected by the presence of *al*. The examples in (23) show that *al* does not affect the behavior of attributive modifiers with regard to inflection either.

- (22) a. (al) de/deze/die eenzame mensen  
all the/these/those lonely people  
b. (al) het/dit/dat heerlijke water  
all the/this/that delicious water
- (23) a. (al) dat/dit soort groot/\*grote verdriet  
all that/this sort big sadness  
b. (al) dat grote/\*groot verdriet  
all that big sadness

*A. Determiners*

Table 2 in Subsection I has shown that pre-determiner bare *al* can precede all definite determiners with equal ease. We illustrate this again in (24).

- (24) a. *al de mannen* [article]  
           all the men  
       b. *al die/deze mannen* [demonstrative pronoun]  
           all those/these men  
       c. *al mijn boeken* [possessive pronoun]  
           all my books

The (a)-examples in (25) and (26) show that the demonstrative and possessive pronouns can be assigned contrastive accent, and the (b)-examples that the acceptability of examples of this type is preserved under Backward °Conjunction Reduction. NP-ellipsis in the second conjunct, as in the (c)-examples, is at least degraded in comparison with the cases involving Backward Conjunction Reduction. In this regard, pre-determiner bare *al* differs markedly from other quantificational pre-determiner elements like *alle* + Num, *allebei* and *heel*; see Sections 7.1.2.2.1, sub II, and Section 7.2.2.1, sub II, for illustration.

- (25) a. *Ik ken wel al DEZE mannen, maar niet al DIE mannen.*  
       b. *Ik ken wel al DEZE Ø, maar niet al DIE mannen.* [RNR]  
       c. <sup>?</sup>*Ik ken wel al DEZE mannen, maar niet al DIE Ø.* [NP-ellipsis]  
           I know AFF all these men but not all those [men]  
       (26) b. *Ik ken wel al ZIJN vrienden, maar niet al HAAR vrienden.*  
           b. *Ik ken wel al ZIJN Ø, maar niet al HAAR vrienden.* [RNR]  
           c. *\*Ik ken wel al ZIJN vrienden, maar niet al HAAR Ø.* [NP-ellipsis]  
               I know AFF all his friends, but not all her [friends]

For completeness' sake, it can be noted that pre-determiner bare *al* can also be inserted to the left of possessive noun phrases, as in (27), although the semi-genitival construction is perhaps somewhat marked, which may be due to the heaviness of the overall construction. According to Van der Lubbe (1978: 133), pre-determiner bare *al* sometimes also occurs between the noun phrase and the functional possessive pronoun, as in <sup>%</sup>*vader al z'n sigaren* (lit.: father all his cigars), but he adds immediately that this will probably not be approved by many speakers; we have not been able to find similar examples. The examples in (27b) show that pre-determiner bare *al* can also precede nominalized possessive pronouns.

- (27) a. *al mijn mans/<sup>?</sup>al mijn man z'n boeken*  
           all my husband's/all my husband his books  
       b. *al de/het mijne/jouwe/zijne/hare/onze/hunne*  
           all the mine/yours<sub>sg</sub>/his/hers/ours/theirs

Pre-determiner bare *al* cannot be construed with noun phrases like (28a&b) containing the indefinite article *een*. This is not even possible in the exclamative construction in (28c), where we are dealing with the spurious article *een* and a plural noun; cf. 5.1.4.2. Pre-determiner bare *al* cannot combine with bare noun

phrases either, which is illustrated in the primed examples for, respectively, bare non-count nouns and bare plurals.

- |         |                                 |                            |
|---------|---------------------------------|----------------------------|
| (28) a. | (*al) een ellende               | a'. (*al) Ø ellende/wijn   |
|         | all a misery                    | all misery/wine            |
| b.      | (*al) een gedoe                 | b'. (*al) Ø verdriet/water |
|         | all a fuss                      | all sorrow/water           |
| c.      | (*al) een boeken dat hij heeft! | c'. (*al) Ø steden/huizen  |
|         | all a books that he has         | all towns/houses           |

An example like *één en al ellende* ‘nothing but misery’ may look deceptively similar to the non-count singular in (28a), but the complex modifier *één en al* (lit.: one and all) differs from the pre-determiner *al* in that the noun is always singular. *Eén en al* also differs from *al* in making an entirely different semantic contribution, which is comparable to that of modifiers like *volledig* ‘complete(ly)’, *alleen maar* ‘only’ or *niets dan* ‘nothing but’, not to that of a universal quantifier like *al*.

### B. Indefinite determiner-like elements

The indefinite determiner-like elements *dat/dit soort* ‘such’ (lit.: that/this kind), which were discussed in Section 4.1.2, are compatible with *al* to their left. The demonstrative modifiers *zulk/dergelijk* ‘such’ exhibit essentially the same behavior as *dat/dit soort*, but because most speakers find constructions of the type *?al zulke/dergelijke boeken* ‘all such books’ somewhat archaic, we will not illustrate such examples in the remainder of this subsection.

- |         |                            |                                 |
|---------|----------------------------|---------------------------------|
| (29) a. | (al) dat/dit soort ellende | a'. (al) dat/dit soort verdriet |
|         | all that/this sort misery  | all that/this sort sorrow       |
| b.      | (al) dat/dit soort wijn    | b'. (al) dat/dit soort fruit    |
|         | all that/this sort wine    | all that/this sort fruit        |
| c.      | (al) dat/dit soort boeken  |                                 |
|         | all that/this sort books   |                                 |

It is likely that in constructions of the type in (29), *al* is not construed with the larger noun phrase directly, but forms a constituent with *dat/dit soort*. Pre-determiner bare *al* phrases generally pattern with strong noun phrases, which was supported in Section 7.1.1, sub IV, by showing that these noun phrases cannot occur as the associate of *er* ‘there’ in expletive constructions like (30a). Adding *al* to *dat/dit soort N*, which is itself a weak noun phrase, does not result in a strong noun phrase, however, which leads to the conclusion that *al* is only construed with the smaller definite noun phrase *dat/dit soort*.

- |         |                                                  |
|---------|--------------------------------------------------|
| (30) a. | *Er komt daar (al) de ellende voor.              |
|         | there comes there all the misery prt.            |
| b.      | Er komt daar (al) dat/dit soort ellende voor.    |
|         | there comes there all that/this sort misery prt. |
|         | ‘All such misery is found there.’                |

The indefinite determiner-like element *van die* ‘such’ in pseudo-partitive constructions, which was discussed in Section 4.1.1.6.1, does not allow bare *al* to its



left, which is not really surprising since these spurious PPs actually act as indefinite noun phrases.

- (31) Hij verkoopt (\*al) van die lekkere wijn/koekjes.  
       he sells all such those tasty wine/cookies  
       ‘He sells such tasty wine/cookies.’

### C. Quantifiers and numerals

Neither weak quantifiers like *enig(e)* ‘some’ and *enkele* ‘some’, nor strong quantifiers like *sommige* ‘some’, *elk* ‘each’ and *ieder* ‘every’ can be preceded by pre-determiner bare *al*.

- (32) a. (\*al) enige ellende/wijn [-neuter]  
       all some misery/wine  
       b. (\*al) enig verdriet/fruit [+neuter]  
       all some sorrow/fruit  
       c. (\*al) enkele/sommige boeken [plural]  
       all some books  
       (33) a. (\*al) elke/iedere stad [-neuter]  
       all each/every town  
       b. (\*al) elk/ieder huis [+neuter]  
       all each/every house

The quantifiers *veel* ‘much/many’ and *weinig* ‘little/few’ need some more discussion. When they are used in their bare form, they cannot be preceded by *al*, which is not surprising since in this form they have the same function as the quantifiers in (32).

- (34) a. (\*al) veel ellende [-neuter]  
       all much misery  
       b. (\*al) veel fruit [+neuter]  
       all much fruit  
       c. (\*al) veel boeken [plural]  
       all many books

However, pre-determiner bare *al* can at least marginally precede the inflected quantifiers *vele* ‘much/many’ or *weinige* ‘little/few’, provided at least that the construction without *al* is acceptable as well; examples like (35) are substantially better than the examples of quantified phrases with *alle*, *alle* + Num, *allebei*, *beide* and *allemaal* that will be discussed in Section 7.1.2.2. Note that the PP-modifier must be present in these examples, regardless of whether *al* is present or absent.

- (35) a. al de <sup>?</sup>vele/<sup>??</sup>weinige mensen in de zaal  
       all the many/few people in the room  
       b. al het <sup>?</sup>vele/<sup>??</sup>weinige water in de vijver  
       all the much/little water in the pond

Note in passing that the examples in (34) contrast sharply with *al te veel N*. In this construction *al* is not a pre-determiner but a modifier of *te veel*, which is clear from

the fact that noun phrases quantified by *veel/weinig* are indefinites and can accordingly occur in expletive *er* ‘there’ constructions. Since (36) shows that noun phrases modified by *al te veel* pattern with noun phrases quantified by *te veel* in this respect, the assumption that *al* acts as a modifier of *te veel* seems reasonable. It is also plausible from a semantic point of view; besides a *too*-degree interpretation, *al te veel* can also receive a high degree paraphrase with *heel erg veel* ‘very much’, where *heel erg* premodifies *veel* as well.

- (36) Er is (al) te veel ellende op de wereld.  
 there is all too much misery on the world  
 ‘There is too much misery in the world.’

The pre-determiner *al* can also be used when the noun phrase contains a numeral, although we find a split in the set of determiners: whereas the demonstratives and possessives in (37b-d) can be preceded by *al*, the definite article *de* in (37a) cannot.

- (37) a. al de (\*drie) boeken  
 all the three books  
 b. al deze/die (drie) boeken  
 all these/those three books  
 c. al mijn (drie) boeken  
 all my three books  
 d. al mijn vaders/mijn vader z’n (drie) boeken  
 all my father’s/my father his three books

We have marked example (37a) as unacceptable with a numeral, despite the fact that Haeseryn et al. (1997) mention *al de tien leerlingen* ‘all the ten pupils’ as a case on which speakers have varying judgments; we have found that speakers as a rule reject noun phrases of this type, although we must add that we did find a small number of examples on the internet. Note that the intended meaning of example (37a) can be expressed by means of *alle drie de boeken* ‘all three the books’ (similar alternants exist for (37b&c): *alle drie die/mijn boeken*); see Section 7.1.2.2.1 for discussion and comparison.

#### D. Personal pronouns and proper nouns

It is impossible for pre-determiner bare *al* to be construed with pronouns. Since *al* requires a plural noun phrase (when headed by a count noun), this is illustrated in (38) for the plural pronouns only. These examples are all ungrammatical with *al* added, regardless of the order of *al* and the pronoun.

- (38) a. \*al wij/ons                      b. \*al jullie                      c. \*al zij/hen/hun  
 all we/us                              all you<sub>pl</sub>                              all they/them/them

The examples in (39) show that pre-determiner bare *al* cannot occur with proper nouns either, which may be surprising given that English *all* or French *tout* can be used in contexts like (39a). Section 7.2.2.1, sub IID, will show that Dutch uses *heel* ‘all/whole’ in contexts of this kind.

- (39) a. \*al Europa/Duitsland/Limburg/Amsterdam      b. \*al Jan  
           all Europe/Germany/Limburg/Amsterdam        all Jan

Perhaps it should be mentioned here that *al* may also directly precede the pronouns *wat* and *wie* in free relatives like in (40), but it is not clear whether we are dealing with pre-determiner bare *al* here; it may also be the case that *al* acts as the antecedent of the relative clause. Since we have no conclusive evidence in support of one of the two analyses, we will leave the decision to future research.

- (41) a. al wat ik hoor  
           all what I hear  
       b. al wie ik zag, geen Peter  
           all who I saw no Peter  
           'I saw lots of people but not Peter'

#### 7.1.2.2. Inflected *alle* 'all'

This section presents a survey of the distribution of inflected *alle* inside the noun phrase. We will distinguish two cases: *alle* followed by a numeral, and "simplex" *alle*, that is, *alle* without a numeral. Since *alle* followed by a numeral is close in behavior to pre-determiner bare *al* discussed in Section 7.1.2.1, we will start with this case.

##### 7.1.2.2.1. Inflected *alle* + numeral

This section discusses instances of *alle* that occur as a subpart of the quantificational pre-determiners in (42). The second part of these pre-determiners consists of a numeral greater than one or the morpheme *-bei*, which can perhaps be considered a short form of *beide* 'both'.

- (42) a. *alle* + Numeral: *alle twee* 'all two', *alle drie* 'all three', etc.  
       b. *allebei* 'both' (lit.: all-both)

Before we start our survey, we want to make a note on the spelling of the forms in (42a). Though spelling *alle* and the numeral as two separate words is the norm, it is also possible to spell *alle* + Num as one single word, especially when the numeral denotes a very small quantity: *alletwee* 'all-two' alongside *alle twee*, *alledrie* 'all-three' alongside *alle drie*. However, a survey on the internet shows that starting from *alle vier* 'all four' the frequency of writing the sequence as a single word rapidly decreases: *allezes* 'all-six' is already rare, *alleacht* is virtually non-existent, and *allenegen* 'all-nine' does not occur at all. *Allebei* is always spelled as one single word. The form *allemaal* 'all' (lit.: all-together) partially patterns with the forms in (42), but it will not be discussed here because its exceptional properties would blur the picture to be sketched for *alle* + Num and *allebei*; we therefore refer the reader to Section 7.1.5 for a discussion of this form.

#### 1. Pre-determiner *alle* and noun phrase types

Like bare *al*, the forms in (42) can only occur in plural noun phrases; this is illustrated for *alle twee* in Table 4, but the judgments remain the same if this modifier is replaced by *allebei*. The ill-formedness of the singular nouns in Table 4

is due to the fact that the pre-determiners in (42) are built up of *alle* and a numeral of a cardinality greater than 1; for the same reason, pre-determiner *alle* cannot precede noun phrases headed by non-count nouns. Note further that the plural examples with the proximate demonstrative *deze* ‘these’ are marked.

Table 4: Pre-determiner *alle* in noun phrases headed by a count noun

|                           | SINGULAR [-NEUTER]/[+NEUTER]                                        | PLURAL [-NEUTER]/[+NEUTER]                                        |
|---------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------|
| DEFINITE<br>ARTICLES      | * <i>alle twee de man/het huis</i><br>all two the man/the house     | <i>alle twee de mannen/huizen</i><br>all two the men/houses       |
| DEMONSTRATIVE<br>PRONOUNS | * <i>alle twee die man/dat huis</i><br>all two that man/that house  | <i>alle twee die mannen/huizen</i><br>all two those men/houses    |
|                           | * <i>alle twee deze man/dit huis</i><br>all two this man/this house | ? <i>alle twee deze mannen/huizen</i><br>all two these men/houses |
| POSSESSIVE<br>PRONOUNS    | * <i>alle twee m'n man/huis</i><br>all two my man/house             | <i>alle twee m'n mannen/huizen</i><br>all two my men/houses       |

As with bare *al*, it is not possible for pre-determiner *alle* to be combined with the pluralia tantum in (43a) or with plurals which denote a conventionally fixed unit, like *Verenigde Staten* ‘US’ in (43b).

- (43) a. \**alle* + Num/*allebei* de hersenen/tropen  
all + Num/all-both the brains/tropics  
b. \**alle* + Num/*allebei* de Verenigde Staten  
all + Num/all-both the United States

## II. Restrictions on accompanying determiners and quantificational elements

This section investigates the restrictions that *alle* + Num and *allebei* pose on the presence of determiners and quantificational elements. As in the case of bare *al*, the syntax of the constituents following *alle* + Num or *allebei* largely mirrors that of the same constituents lacking these quantifiers. For example, adjectival modification of the noun is not affected by the presence of these quantifiers, as is illustrated in (44); the attributive modifiers, of course, always carry an inflectional schwa, due to the fact that noun phrases like these are plural.

- (44) alle tien/*allebei* de/die/?*deze* eenzame mensen  
all/both the/those/these lonely people

### A. Determiners

Table 4 has already shown that pre-determiner *alle* + Num can precede the definite article *de* and the distal demonstrative *die* with equal ease; the relevant examples are repeated here as (45a&b), and supplemented with the corresponding *allebei* ‘both’ examples. The proximate demonstrative *deze* in (45c), however, is rather marked in a position linearly following the pre-determiner *alle* + Num and *allebei*, and sequences like these are also relatively rare on the internet. In this regard pre-determiner *alle* differs from *al*, which is perfect to the left of the proximate demonstrative, and instead resembles pre-determiner *heel* ‘all/whole’; cf. Section 7.2.2.1, sub I.

- (45) a. alle twee/allebei de mannen/huizen  
           all two/both the men/houses  
       b. alle twee/allebei die mannen/huizen  
           all two/both those men/houses  
       c. <sup>?</sup>alle twee/allebei deze mannen/huizen  
           all two/both these men/houses

The marked proximate demonstrative cases improve to a certain degree in contexts of the type in (46), where the demonstrative receives contrastive accent. The acceptability of examples of this type improves further under Backward °Conjunction Reduction, as in the primed examples. By contrast, NP-ellipsis in the second conjunct leads to ungrammaticality, as is shown in the doubly-primed examples. The ungrammaticality of these examples is due entirely to the presence of the pre-determiners *alle tien* and *allebei*; with these quantifier elements removed, the sentences are perfect. Replacing these pre-determiners with bare *al* also leads to a somewhat better result, as can be seen in Section 7.1.2.1, sub IIA.

- (46) a. <sup>(?)</sup>Ik ken wel alle tien DEZe mannen, maar niet alle tien DIE mannen.  
       a'. Ik ken wel alle tien DEZe Ø, maar niet alle tien DIE mannen.  
       a''. \*Ik ken wel alle tien DEZe mannen, maar niet alle tien DIE Ø.  
           I know AFF all ten these men but not all ten those [men]  
       b. <sup>?</sup>Ik ken wel allebei DEZe mannen, maar niet allebei DIE mannen.  
       b'. Ik ken wel allebei DEZe Ø, maar niet allebei DIE mannen.  
       b''. \*Ik ken wel allebei DEZe mannen, maar niet allebei DIE Ø.  
           I know AFF both these men but not both those [men]

Possessive pronouns can be placed between *alle* + Num/*allebei* and the projection of the noun, provided that they are prosodically weak: the reduced forms of the pronouns in (47a) are fine, whereas the full forms in (47b) are marked to varying degrees — in particular *onze* 'our' and *hun* 'their', which do not have a weak form, are relatively acceptable, but *jullie*, which can only be reduced under the strict conditions discussed in Section 5.2.2.3, seems completely unacceptable. Example (47c) shows that stressed possessive pronouns are impossible. The (semi-)genitival possessors in (47d) are acceptable in this position roughly to the same marginal degree as full possessive pronouns, but, for some unclear reason, proper nouns like those in (47e) give rise to an unacceptable result.

- (47) a. alle tien/allebei m'n/je/z'n/d'r boeken  
           all ten/all-both my/your/his/her books  
       b. alle tien/allebei <sup>??</sup>mijn/\*jouw/<sup>??</sup>zijn/<sup>??</sup>haar/<sup>?</sup>onze/\*jullie/<sup>?</sup>hun boeken  
           all ten/all-both my/your<sub>sg</sub>/his/her/our/your<sub>pl</sub>/their books  
       c. \*alle tien/allebei MIJN boeken  
           all ten/all-both my books  
       d. <sup>??</sup>alle tien/allebei m'n vaders/m'n vader z'n boeken  
           all ten/all-both my father's/my father his books  
       e. \*alle tien/allebei Jans/Jan z'n boeken  
           all ten/all-both Jan's/Jan his books

The *alle* + Num examples in (47) alternate with constructions in which bare *al* precedes and the numeral follows the possessor of the noun: *al m'n tien boeken* 'al my ten books'; cf. Section 7.1.2.1, sub IIC. This syntactic alternation does not seem semantically innocuous, though judgments are subtle. Consider the pair in (48), used in a context in which a selection committee is finalizing a short list, and each of the committee members has drawn up a list of his three top candidates. In this context, *alle drie onze kandidaten* primes a reading in which all committee members selected the same three candidates (hence the total number of candidates figuring on the committee members' lists is exactly three), while *al onze drie kandidaten* seems more felicitously used in a situation in which not all committee members selected the same three candidates (hence the total number of candidates figuring on the committee members' lists exceeds three).

- (48) a. *Alle drie onze kandidaten* (\*vormen samen een groep van zeven man).  
 all three our candidates form together a group of seven people  
 b. *Al onze drie kandidaten* (vormen samen een groep van zeven man).  
 all our three candidates form together a group of seven people

For completeness' sake, it should be noted that *alle* + Num and *allebei* can also be used with nominalized possessive pronouns. The article preceding the noun must be *de*, because *alle* + Num and *allebei* do not combine with singular noun phrases; this excludes the article *het*, which is only found in singular noun phrases.

- (49) a. *alle twee/allebei de mijne/jouwe/zijne/hare/onze/hunne*  
 all two/both the mine/yours<sub>sg</sub>/his/hers/ours/theirs  
 b. \**alle twee/allebei het mijne/jouwe/zijne/hare/onze/hunne*  
 all two/both the mine/yours<sub>sg</sub>/his/hers/ours/theirs

Pre-determiner *alle* + Num cannot be construed with noun phrases containing the indefinite article *een*, not even in contexts in which, in the absence of the pre-determiner, the indefinite article can combine with a plural noun phrase.

- (50) a. *Een boeken dat hij heeft!*  
 a books that he has  
 'He has a lot of books/very nice books!'  
 b. \**Alle tien/allebei een boeken dat hij heeft!*  
 all ten/both a books that he has

As is shown in (51a), the pre-determiner *allebei* cannot combine with bare plurals either. *Alle* + Num, on the other hand, can be construed with bare plurals, although this depends on the numeral in question. The empirical generalization seems to be that with "high" numerals, like *vijffentwintig* in (51d), the determiner *de* is preferably dropped (although some speakers find (51d) with the determiner *de* perfectly acceptable), whereas with "low" numerals the pattern without the determiner *de* is awkward, to a degree which varies somewhat from speaker to speaker and from case to case (Perridon 1997: 184). A rough search on the internet has shown that in examples like (51a&b), with *allebei* and *alle twee/drie/vier*, use of the article *de* is clearly preferred. In cases like (51c), with *alle vijf/zes* both options have about the same frequency. In examples like (51d) with high numbers,

dropping the article seems obligatory: the string [*alle vijftientig de*] resulted in no relevant hits, whereas the string [*alle vijftientig*] provided many cases of the relevant construction; see also <http://taaladvies.net/taal/advies/vraag/48>.

- (51) a. allebei/alle twee de/\*Ø boeken      c. alle vijf/zes/... de/Ø boeken  
       all-both/all two the books      all five/six/... the books  
       b. alle drie/vier de/\*Ø boeken      d. alle vijftientig Ø/%de boeken  
       all three/four the books      all twenty five Ø/the books

When the numeral is modified by an adverb, construing *alle* + Num with a bare plural is the *only* possibility; adding the article *de* gives rise to an unacceptable result, even with relatively “low” numerals like *vijf*.

- (52) alle ongeveer/bijna/ruim      honderd/vijf (\*de) deelnemers  
       all approximately/almost/well over hundred/five the participants

### B. Indefinite determiner-like elements

Example (53a) shows that the indefinite determiner-like elements *dat/dit soort* ‘such’, discussed in Section 4.1.2, are not compatible with *alle* + Num/*allebei* to their left. Example (53b) shows that the same thing holds for pseudo-partitive noun phrases, discussed in Section 4.1.1.6.1, with the indefinite determiner-like element *van die* ‘such’.

- (53) a. \*alle tien/allebei dat/dit soort boeken  
       all ten/all-both that/this sort books  
       b. \*alle tien/allebei van die boeken  
       all ten/all-both of such books

### C. Quantifiers and numerals

Since the pre-determiners *allebei* and *alle* + Num already contain a cardinal number, the addition of other quantificational elements to the noun phrase is impossible; the examples below are all ungrammatical. Numerals are, of course, excluded since this would either result in unwanted redundancy or in a contradiction: \**alle vier de drie/vier boeken* ‘all four the three/four books’.

- (54) a. \*alle tien/allebei enige/sommige boeken  
       all ten/all-both some books  
       b. \*alle tien/allebei veel boeken  
       all ten/all-both many books  
       c. \*alle tien/allebei de vele/weinige mensen in de zaal  
       all ten/all-both the many/few people in the room  
       d. \*alle twee/allebei de twee/beide boeken  
       all two/all-both the two/both books

### D. Personal pronouns and proper nouns

*Alle* + Num and *allebei* can form a constituent with a plural personal pronoun, provided that the pronoun is realized in its strong, unreduced form and that it precedes the quantifier. That the string *zij alle tien/allebei* in (55) is a constituent is clear from the fact that it can precede the finite verb *zijn* in the main clauses (the

°constituency test). Note, though, that (55b), in which the pronoun has an inanimate referent, is much worse than (55a), in which the pronoun is animate. This may be related to the fact that strong pronouns are normally interpreted as [+HUMAN]; cf. Section 5.2.1.1.5.

- (55) a. (Wat die kinderen betreft,) zij/\*ze alle tien/allebei zijn zeer slim.  
 what those children concerns they all ten/both are very smart  
 ‘As far as those children are concerned, they are all ten/both very smart.’  
 b. (Wat die problemen betreft,) <sup>??</sup>zij/\*ze alle tien/allebei zijn zeer ernstig.  
 what those problems concerns they all ten/both are very serious  
 ‘As far as those problems are concerned, they are all ten/both very serious.’

It must also be noted that, while grammatical, example (55a) is marked compared to the variants in (56), in which the pronoun and the quantifier do not form a constituent; this use as °floating quantifier is more extensively discussed in Section 7.1.4.

- (56) • Discourse topic: a number of children  
 a. Zij/Ze zijn alle tien/allebei zeer slim.  
 they are all ten/all-both very smart  
 ‘They are all ten/both very smart.’  
 b. Alle tien/allebei zijn zij/ze zeer slim.  
 all ten/all-both are they very smart

Since proper nouns are normally uniquely referring singular expressions, it is correctly predicted that they do not co-occur with pre-determiner *alle* + Num, as shown by (57a). The exceptional case in (57b) is not a counter-example; here the plural proper noun is preceded by the definite article *de*, and therefore behaves as a count noun.

- (57) a. \*alle tien Jan/Jannen                      b. alle tien de Jannen  
           all ten Jan<sub>sg/pl</sub>                                all ten the Jan<sub>pl</sub>

#### 7.1.2.2.2. Inflected simplex *alle*

The construction with pre-determiner *al* in (58a), discussed in Section 7.1.2.1, is semantically roughly on a par with the *alle* N construction in (58b), and the two constructions are therefore often considered to be surface variants, *alle* being assumed to be a fusion of bare *al* and the definite determiner. The investigation of the meaning contribution of *alle* and *al de* in Section 7.1.1 has already shown that there are semantic reasons to not follow this “fusion” approach, and the discussion below will show that there are also distributional differences between them that make such an approach less plausible.

- (58) a. al de mannen                                b. alle mannen  
           all the man                                    all men

This section will discuss the properties of *alle* inside the noun phrase. In conjunction with *alle* we will consider *beide* ‘both’, which is syntactically virtually identical with *alle* except where noted otherwise.



*I. Simplex alle and noun phrase types*

Table 5 shows that *alle* and *beide* cannot occur in singular count noun phrases, regardless of the grammatical gender of the noun. They do readily occur in plural noun phrases, which must be determinerless; see Subsection II for more discussion.

Table 5: Inflected *alle* ‘all’ and *beide* ‘both’ in noun phrases headed by a count noun

|                | [-NEUTER]                        | [+NEUTER]                         | PLURAL                                                   |
|----------------|----------------------------------|-----------------------------------|----------------------------------------------------------|
| INFLECTED ALLE | * <i>alle stad</i><br>all town   | * <i>alle huis</i><br>all house   | <i>alle steden/huizen</i><br>all towns/houses            |
| BEIDE          | * <i>beide stad</i><br>both town | * <i>beide huis</i><br>both house | <i>alle/beide steden/huizen</i><br>all/both towns/houses |

It must be noted, however, that in older stages of the language *alle* was possible with singular count nouns denoting a temporal interval like *alle maand* ‘each month’, even when the noun was preceded by a numeral, as in *alle vier maand* (lit.: all four month) cf. *Woordenboek der Nederlandsche Taal*, lemma *al*. In present-day Dutch, *elk(e)* is used instead (*elke maand*), although there are still some formal, idiomatic cases like *in alle geval* ‘in any case’ and *te allen tijde* ‘at all times’. Finally, it should be noted that the form *alleman* with singular *man* exists as a compound, found in the fixed expression *Jan en alleman* ‘everybody’ (lit.: Jan and everyman), and as the left-hand member of the larger compound *allemansvriend* ‘everyman’s friend’.

Though *alle* and *beide* precede plural noun phrases, they cannot be combined with the pluralia tantum in (59a) or with plurals like (59b) that denote a conventionally fixed unit.

- (59) a. \**alle/beide hersenen/tropen*    b. \**alle/beide Verenigde Staten*  
      all/both    brains/tropics            all/both    United States

Inflected *alle* can also be combined with non-count nouns, although there are many restrictions that are not well understood. Furthermore, the data are not always as clear as one would like. Let us start with mass nouns like *vee* ‘cattle’ or *meubilair* ‘furniture’. Although many cases can be found on the internet, we have the impression that *alle* does not readily combine with such nouns: our feeling is that *al het vee/meubilair* ‘all the cattle/furniture’ is much preferred to *alle vee/meubilair*.

- (60) a. al het<sup>??</sup> *alle vee*                            b. al het<sup>??</sup> *alle meubilair*  
      all the/all    cattle                            all the/all    furniture

It might be the case that the two forms differ in meaning and that the form with *al het* is °D-linked, that is, refers to a contextually defined set of entities, whereas the form with *alle* is non-D-linked, but we leave this to future research to decide. Furthermore, there are more or less idiomatic examples involving *alle* + mass noun: example (61a) provides one involving the mass noun *verkeer* ‘traffic’. That noun phrases like these are not productively used outside their formulaic syntactic contexts is shown by the fact that, to our ear, (61b) seems pretty awkward with inflected *alle*.

- (61) a. gesloten voor alle verkeer  
closed for all traffic
- b. Al het/\*? Alle verkeer op de snelweg stond vast.  
all the/all traffic on the highway stood fast  
'All traffic on the highway was jammed.'

With abstract non-count nouns gender may play a role: neuter nouns like *verdriet* 'sorrow' and *geluk* 'happiness' seem marked, whereas non-neuter nouns like *moeite* 'trouble' and *hoop* 'hope' seem completely acceptable with inflected *alle*. Our impression seems supported by a Google search performed in July 2008 on the nouns mentioned: the neuter nouns are more often preceded by *al het* 'all the' than by *alle* 'all', *al de moeite* 'all the trouble' was about as frequent as *alle moeite* 'all trouble', and *alle hoop* 'all hope' far outnumbered *al de hoop* 'all the hope'. It must be noted, however, that the results may not reflect that actual productive use of the sequence *alle* + abstract noun, given that abstract non-count nouns frequently occur in frozen expressions like those given in (62).

- (62) a. Straks komt er een eind aan alle verdriet.  
soon comes there an end to all sorrow  
'Soon, there will come an end to all sorrow.'
- b. Alle moeite is voor niets geweest.  
all trouble is for nothing been  
'All efforts were to no avail.'
- c. Hij had alle hoop al opgegeven.  
he had all hope already given.up
- d. Alle begin is moeilijk.  
all beginning is difficult

With substance nouns, gender may again play a role. Neuter nouns like *water* and *gebak* 'confectionery' seem marked, whereas non-neuter nouns like *wijn* 'wine' and *kaas* 'cheese' are completely acceptable with inflected *alle*. Our impression again seems to be confirmed by a Google search performed in July 2008 on the nouns mentioned: the neuter nouns are more often preceded by *al het* 'all the' than by *alle* 'all', whereas the non-neuter nouns are more often preceded by *alle* 'all' than by *al de* 'all the'. Nevertheless, it might be the case that judgments differ from case to case, and from person to person. Although future research is needed to see whether this is justified, we will assume for the moment that the general pattern is that substance nouns can be preceded both by *alle* 'all' and by *al de/het* 'all the'.

Table 6 aims at summarizing the findings above, and also shows that *beide* differs from inflected *alle* in that it never co-occurs with non-count nouns.

Table 6: Inflected *alle* and *beide* in noun phrases headed by a non-count noun

|                    | INFLECTED ALLE                        |                                          | BEIDE                                   |                                              |
|--------------------|---------------------------------------|------------------------------------------|-----------------------------------------|----------------------------------------------|
|                    | [+NEUTER]                             | [-NEUTER]                                | [+NEUTER]                               | [-NEUTER]                                    |
| SUBSTANCE<br>NOUNS | ? <i>alle water</i><br>all water      | <i>alle wijn/kaas</i><br>all wine/cheese | * <i>beide water</i><br>both water      | * <i>beide wijn/kaas</i><br>both wine/cheese |
| ABSTRACT<br>NOUNS  | ? <i>alle verdriet</i><br>all sadness | <i>alle moeite</i><br>all trouble/hope   | * <i>beide verdriet</i><br>both sadness | * <i>beide moeite</i><br>both trouble        |
| MASS<br>NOUNS      | ?? <i>alle vee</i><br>all cattle      | ?? <i>alle politie</i><br>all police     | * <i>beide vee</i><br>both cattle       | * <i>beide politie</i><br>both police        |

Section 7.1.1 has shown that inflected *alle* need not express universal quantification, but may also have a high degree reading; the examples in (63a&b), illustrate again that *alle* phrases headed by an abstract non-count noun are quite common on this reading. Another context in which *alle* can combine with an abstract non-count noun is given in (63c); the adjective *mogelijke* seems to be the licenser of *alle* here; possibly, *alle mogelijke* should be analyzed as a constituent.

- (63)
- High degree *alle*

a. *alle lof*  
all laudation

a'. *alle reden*  
all reason (every reason)

b. *in alle ernst*  
in all seriousness

b'. *voor alle zekerheid*  
for all security

c. *alle mogelijke moeite/onzin/pracht/...*  
all possible trouble/nonsense/beauty/...

The universal quantifier *alle* gives rise to unacceptable or highly marked results when combined with a deverbal noun. A systematic class of exceptions to this rule is formed by GE-nominalizations, which can be construed relatively freely with *alle* (though the results may vary from case to case). This is shown in Table 7, which also shows that *beide* is never possible in this context.

Table 7: Inflected *alle* and *beide* in noun phrases headed by a deverbal noun

|                       | INFLECTED ALLE                                                       | BEIDE                                                           |
|-----------------------|----------------------------------------------------------------------|-----------------------------------------------------------------|
| BARE STEM             | ?? <i>alle werk (van deze week)</i><br>all work of this week         | * <i>beide werk (van deze week)</i><br>both work of this week   |
| NOMINAL<br>INFINITIVE | * <i>alle werken</i><br>all work                                     | * <i>beide werken</i><br>both work                              |
| GE-<br>NOMINALIZATION | <i>alle gedoe/gezeur</i> ? <i>gewerk</i><br>all fuss/nagging/working | * <i>beide gedoe/gezeur/gewerk</i><br>both fuss/nagging/working |

This subsection has shown that there are various restrictions on the use of *alle* in combination with non-count nouns; cf. Table 6 and Table 7. Although the nature of these restrictions is far from clear, it is useful to point out that these restrictions are completely lacking in the case of pre-determiner bare *al*; cf. Table 2 and Table 3. This is unexpected on, and can therefore be seen as a problem for, the “fusion” approach, which considers *alle* a contracted form of pre-determiner bare *al* and the determiner following it.

## II. Restrictions on accompanying determiners and quantificational elements

This subsection investigates the restrictions that *alle* ‘all’ and *beide* ‘both’ pose on the presence of co-occurring determiners and quantificational elements. As in the case of bare *al* and the pre-determiner *alle* + Num, the syntax of the constituents modified by *alle* and *beide* largely mirrors that of the same constituents lacking these quantifiers. We will see later in this section that this fact provides a nice testing ground for the “fusion” approach, according to which *alle* is a contracted form of *al* and a definite determiner; cf. the discussion of example (71).

### A. Determiners

In the present-day vernacular, simplex *alle* cannot be combined with the definite article *de* or the demonstratives *die/deze* ‘those/these’ (although the sequence *alle de/die/deze* can still be found in archaic and very formal language). *Beide* differs from *alle* in that it can be used to the right, though not to the left, of these determiners. Note that the fact that *beide* is not in complementary distribution with the definite article indicates that *beide* cannot be treated as the result of “fusion” of the morpheme *bei*, also found in the pre-determiner *allebei* (see Section 7.1.2.2), and the definite article.

- (64) a. \**alle/beide de/die/deze mannen*  
           all/both the/those/these men  
       b. *de/die/deze beide/\*alle mannen*  
           the/those/these both/all men

There is no way of salvaging the ungrammatical examples in (64a) with the aid of contrastive accent; the bad cases are bad, no matter what context they are inserted into. On the other hand, the contrastive example in (65a), a contextualized variant of grammatical (64b) with *beide*, is somewhat awkward but structurally well-formed. Backward Conjunction Reduction is marginally possible in (65b) when applied to *beide mannen*, but highly awkward when applied to *mannen* alone. NP-ellipsis in the second conjunct strengthens this distinction; (65c) show that it is fine with *beide mannen* elided but unacceptable with just *mannen* undergoing ellipsis.

- (65) a. ?Ik ken wel déze beide mannen, maar niet dié beide mannen.  
       b. Ik ken wel déze ?(??beide) Ø, maar niet dié beide mannen. [RNR]  
       c. Ik ken wel déze beide mannen, maar niet dié (\*beide) Ø. [NP-ellipsis]  
           I know AFF these both men but not those both [men]

*Alle* does not occur in noun phrases that contain a possessive pronoun. *Beide*, on the other hand, is again possible if it appears to the right of the possessor, as is shown by (66b). The acceptability of these examples is unaffected by the complexity of the possessor; all variants of (66b) with *beide* in the right-hand slot are perfect, while all their counterparts with *alle* are unacceptable.

- (66) a. \**alle/beide mijn/mijn vaders/mijn vader z'n auto's*  
           all/both my/my father's/my father his cars  
       b. *mijn/mijn vaders/mijn vader z'n beide/\*alle auto's*  
           my/my father's/my father his both/all cars

The examples in (67a) show that neither *alle* nor *beide* combine with nominalized possessive pronouns. The ungrammaticality of (67a) is striking in the light of the impeccability of (67b), involving the pre-determiner counterparts of *alle* and *beide*. This contrast between (67a&b) is a further indication that *alle/beide* are not the result of “fusion” of the pre-determiners in (67b) with the definite article following them. The difference between *al* and *beide* in (67b') is due to the fact that only the former can be combined with non-count nouns; the fact that *het mijne* is necessarily singular therefore excludes *allebei*; cf. the earlier discussion of example (49).

- (67) a. \**alle/beide mijne/jouwe/zijne/hare/onze/hunne*  
           all/both mine/yours<sub>sg</sub>/his/hers/ours/theirs  
       b. *al/allebei de mijne/jouwe/zijne/hare/onze/hunne*  
           all/both the mine/yours<sub>sg</sub>/his/hers/ours/theirs  
       b'. *al/\*allebei het mijne/jouwe/zijne/hare/onze/hunne*  
           all/both the mine/yours<sub>sg</sub>/his/hers/ours/theirs

*Alle* and *beide* cannot be construed with noun phrases containing the indefinite article *een*, not even in the exclamative context in (68b), in which, in the absence of the pre-determiner, the indefinite article can combine with a plural noun phrase.

- (68) a. \**<alle/beide> een <alle/beide> ellende*  
           all/both a misery  
       b. \**<Alle/Beide> een <alle/beide> boeken dat hij heeft!*  
           all/both a books that he has

Earlier we saw that, next to *beide mannen* ‘both men’, *de beide mannen* ‘the both men’ is also grammatical. It must be noted, however, that the interpretation and concomitant syntactic distribution of the two forms are not identical. It seems to be the case that *beide* used without a determiner is semantically on a par with *allebei* + Det: *allebei de mannen* ‘both the men’. Post-determiner *beide*, on the other hand, is semantically distinct and behaves more like the numeral *twee*: *de beide/twee mannen* ‘the two men’. This difference between pre- and post-determiner *beide* can be brought out by means of the examples in (69). While (69a) is preferably interpreted such that the two Koreas have made a joint decision, the interpretation for (69b) is one in which each of the two Koreas has reached a decision on its own. In this regard (69b) seems to be on a par with (69b'), which, however, also allows an interpretation according to which there is one joint decision taken.

- (69) a. *De beide/twee Korea's hebben besloten de grenzen te openen.*  
           the both/two Koreas have decided the borders to open  
           ‘The two Koreas have decided to open the borders.’  
       b. *Allebei de Korea's hebben besloten de grenzen te openen.*  
           all-both the Koreas have decided the borders to open  
           ‘Both Koreas have decided to open the borders.’  
       b'. *Beide Korea's hebben besloten de grenzen te openen.*  
           both Koreas have decided the borders to open

That (69b&b') pattern together and are distinct from the pair in (69a) seems confirmed by (70): whereas the two examples in (70a) are fully acceptable, those in (70b) are anomalous.

- (70) a. Het overleg tussen de beide/twee Korea's was vruchteloos.  
           the consultation between the both/two Koreas was fruitless  
       b. \*Het overleg tussen allebei de/beide Korea's was vruchteloos.  
           the consultation between both the/both Koreas was fruitless

To conclude this subsection on determiners, we want to pay some more attention to the "fusion" approach to *alle*, according to which it is a fused form of *al* and the definite determiner. The overall conclusion from the discussion above is that simplex *alle* combines only with plural *bare* noun phrases. The complementary distribution of *alle* and the determiners makes it possible to hypothesize that the former occurs in the determiner position, which would of course support the "fusion" approach to *alle*. The examples in (71), however, provide evidence against this approach, since they show that *alle* does not behave like a definite determiner when it comes to the determination of adjectival inflection. While the definite article in (71c) triggers the inflectional *-e* ending in the attributive modifier of the noun, the attributive modifier in the *alle* phrase in (71a), taken from Perridon (1997), inflects as in the indefinite noun phrase in (71b).

- (71) a. alle <sup>?</sup>slim/\*slimme geknoei in de handel  
           all clever fiddling in the commerce  
       b. slim/\*slimme geknoei  
           clever fiddling  
       c. het slimme/\*slim geknoei  
           the clever fiddling

Although noun phrase internal *alle* does not qualify as a definite determiner (which in turn may indicate that it does not occupy the determiner position in the DP), the noun phrase in (71a) has the outward appearance of a definite/strong noun phrase in the sense that it cannot be used as the associate of expletive *er* in existential or presentational constructions. Note that this holds for all *alle* phrases except for those in which *alle* has a high degree reading; cf. Section 7.1.1.

- (72) a. Er was slim geknoei in de handel.  
           there was clever fiddling in the commerce  
       b. \*Er was alle slim geknoei in de handel.  
           there was all clever fiddling in the commerce

Though the adjectival inflection suggests that the noun phrase *alle slim geknoei* is internally indefinite, the same noun phrase behaves like a definite/strong noun phrase in its external syntactic distribution. This paradox has received little or no attention in the literature to date; we will not try to resolve the tension between these apparently irreconcilable characteristics of *alle* phrases here, but do repeat our earlier conclusion that *alle* does not behave as a contraction of *al* and the definite article.

*B. Indefinite determiner-like elements*

The indefinite determiner-like elements *dat/dit soort* ‘such’, discussed in Section 4.1.2, are not compatible with *alle/beide*, regardless of their position relative to the quantifiers. The same thing holds for the indefinite determiner-like element *van die* ‘such’ (lit.: of those) in the pseudo-partitive construction.

- (73) a. \**<alle/beide> dat/dit soort <alle/beide> boeken*  
           all/both       that/this sort               books  
       b. \**<alle/beide> van die <alle/beide> boeken*  
           all/both       of those               books  
           ‘all such books’

*C. Quantifiers and numerals*

Simplex *alle* and *beide* cannot co-occur with other quantifiers in a noun phrase. The examples in (74) are all ungrammatical. Word order patterns like *alle honderd boeken* ‘all hundred books’ do yield a grammatical result with higher numerals, but *alle* does not directly quantify the noun phrase in such constructions, arguably forming a constituent together with the numeral; cf. the discussion in Section 7.1.2.2.1, sub II.

- (74) a. \**alle/beide enige/sommige boeken*  
           all/both   some               books  
       b. \**alle/beide veel/vele mensen in de zaal*  
           all/both   many       people in the room  
       c. \**alle/beide weinig/weinige mensen in de zaal*  
           all/both   few               people in the room

*D. Pronouns*

Another consideration concerning *alle/beide* that casts doubt on a “fusion” approach is the fact illustrated in the primeless examples in (75) that, in contradistinction to the pre-determiners *al* and *allebei*, *alle* and *beide* can be combined with animate personal pronouns into a single constituent, where the quantifier is obligatorily adorned with a mute, orthographic *-n*. As in the case of *alle* + Num, the pronoun must be realized in its strong form and precede the quantifier, which may account for the fact that the examples in (75a’) are not acceptable, given that pronouns referring to non-human entities normally have the weak form; cf. Section 5.2.1.1.5.

- (75) a. (Wat die kinderen betreft,)   zij/\*ze allen/beiden   zijn   erg slim.  
           what those children concerns they   all/both       are   very smart  
       a’. \*(Wat die problemen betreft,)   zij alle/beide zijn   zeer ernstig.  
           what those problems concerns they all/both are   very serious  
       b. (Wat die kinderen betreft,)   God zij met   hen/\*ze allen/beiden.  
           what those children concerns God be   with   them   all/both

The examples in (75a) are marked compared to their variants in (76). These so-called °floating quantifier constructions, which allow both the strong and the weak form of the pronoun (which can therefore also refer to non-human entities), are discussed in Section 7.1.4. Note further that the forms *allen/beiden* belong to the

formal lexicon: in everyday spoken language, these forms are typically replaced by the invariant forms *allemaal* and *allebei*, as in the primed examples of (76).

- (76) • Discourse topic: a number of children
- a. Zij/Ze zijn allen/beiden erg slim.  
they are all/both very smart
  - a'. Zij/Ze zijn allemaal/allebei erg slim.  
they are all/both very smart
  - b. Allen/Beiden zijn zij/ze erg slim.  
all/both are they very smart
  - b'. Allemaal/Allebei zijn zij/ze erg slim.  
all/both are they very smart

Although the pronouns and the floating quantifiers do not form a single constituent in (76), they do in the examples in (75). In (75a), this is evident from the fact that the string *zij allen/beiden* occupies the position to the left of the finite verb (the °constituency test). The single-constituent status of *hen allen/beiden* in (75b) is also undisputed, given that it functions as the complement of a preposition. The same thing holds for the quantified possessive pronouns in (77), where the quantifier takes the genitive case-form *aller/beider*.

- (77) a. Ons aller/beider vriend Jan is gisteren overleden.  
our all/both<sub>gen</sub> friend Jan is yesterday died  
'Jan, a friend of all/both of us, died yesterday.'
- b. U aller/beider medewerking wordt zeer op prijs gesteld.  
you<sub>polite</sub> all/both<sub>gen</sub> cooperation is very on price put  
'The cooperation of all/both of you will be greatly appreciated.'
- c. Dit is het feest van de heilige Hubertus, hun aller/beider schutspatroon.  
this is the feast of the holy Hubertus their all/both<sub>gen</sub> patron saint  
'This is the feast of Saint Hubert, the patron saint of all/both of them.'

The fact that *aller* and *beider* are marked with genitive case again shows that we are dealing with constructions that are not part of the present-day vernacular but with relics of older stages of the language. Note in passing that the fact that (77b) has the form *u* instead of the possessive pronoun *uw* suggests that the pronouns in these examples are not (or, rather, no longer) genitive forms; the fact that *hun* is used in (77c), and not *hen*, further suggests that we are dealing with *dative* forms. If so, this would also account for the fact that the pronoun *ons* in (77a) is always uninflected (\**onze aller vriend*): unlike the genitive/possessive pronoun, the object pronoun *ons* has no schwa-inflected form; for more information on this genitive construction see [www.onzetaal.nl/taaladvies/advies/uw-u-beider-aanwezigheid](http://www.onzetaal.nl/taaladvies/advies/uw-u-beider-aanwezigheid).

That it is possible for *allen/beiden* to quantify and form a single constituent with pronouns provides evidence that *allen/beiden* is not the result of contraction of *al/bei* and a definite article, since pronouns never combine with articles in Dutch (\**de zij/hen/hun* 'the they/them/their'). For completeness' sake, it can be added that the independently used neuter singular demonstratives *dit* and *dat* can be combined with *al* into a single constituent; the form used then is *alles*.



- (78)       Dit/Dat alles zou       onnodig       zijn geweest, als ...  
          this/that all   would unnecessary have been   if  
          ‘This/That would all have been unnecessary if ...’

7.1.3. Distribution of noun phrases modified by *al* and *alle*

This section discusses the syntactic distribution of noun phrases containing pre-determiners bare *al*, *alle* + Num and simplex *alle* described in Section 7.1.2. We will consider whether they occur as arguments (subject, direct object, indirect object, complement of a preposition), as predicates and/or as °adjuncts. In addition, we will discuss the distribution of noun phrases containing the forms *allebei* and *beide* ‘both’.

7.1.3.1. Distribution as arguments

Noun phrases containing pre-determiner bare *al*, *alle* + Num/*allebei*, or simplex *alle/beide* all occur in argument positions, and there are no restrictions on the argument functions these phrases may have. Table 8 summarizes the distribution of the relevant noun phrases.

Table 8: Distribution of *al* and its alternants as arguments

|                             | bare <i>al</i> | <i>alle</i> + Num | <i>allebei</i> | <i>alle</i> | <i>beide</i> |
|-----------------------------|----------------|-------------------|----------------|-------------|--------------|
| subject (79a)               | +              | +                 | +              | +           | +            |
| derived subject (79a')      | +              | +                 | +              | +           | +            |
| direct object (79b)         | +              | +                 | +              | +           | +            |
| indirect object (79c)       | +              | +                 | +              | +           | +            |
| object of preposition (79d) | +              | +                 | +              | +           | +            |

The examples in (79) illustrate the contexts in which the forms listed in the table can be inserted; note that, contrary to our usual convention, the parentheses around the article do *not* indicate that *de* is optional: it is obligatory with bare *al*, *alle* + Num and *allebei*, but it cannot be realized with *alle* and *beide*. In the (a)-examples in (79), we are dealing with subjects; in the first example the phrase within square brackets is an underlying subject, and in the second (passive) example it is a derived one. Examples (79b&c) illustrate the use of this phrase as a direct and an indirect object, respectively, and (79d) illustrates its use as the object of a preposition.

- (79) a.   [\_\_\_ (de) beurspromovendi] werkten hard aan hun proefschrift.  
          the bursary.students   worked hard on their dissertation  
      a'.   [\_\_\_ (de) beurspromovendi] werden door de commissie ondervraagd.  
          the bursary.students   were   by the committee   interrogated  
      b.   De commissie ondervroeg [\_\_\_ (de) beurspromovendi].  
          the committee interrogated       the bursary.students  
      c.   De commissie stelde [\_\_\_ (de) beurspromovendi] een vraag.  
          the committee posed       the bursary.students   a question  
      d.   De commissie luisterde aandachtig naar [\_\_\_ (de) beurspromovendi].  
          the committee listened attentively to       the bursary.students

7.1.3.2. *Distribution as predicates*

The distribution of *al* and its alternants is rather restricted within predicative noun phrases. It seems that nominal predicates containing a form of *al* are more or less restricted to identificational copular constructions, with the singular demonstrative *dit/dat* ‘this/that’ or the singular neuter personal pronoun *het* ‘it’ as subject. Note that replacing the demonstrative in the primeless examples in (80) with the personal pronoun *zij* ‘they’, which is expected to be acceptable since it agrees in number with the predicative noun phrase, gives rise to systematically more degraded results. This is shown by the primed examples. Example (80b) shows that, even with the demonstrative pronoun as the subject of the copular construction, it is difficult to construct pragmatically felicitous examples for *allebei*. This is presumably unrelated to syntax, given that noun phrases quantified by means of the otherwise identical *alle* + Num quantifier can be used as predicates, and that replacing *alle drie* with *alle twee* also gives rise to a marked result.

- (80) a. Dat zijn al de beurspromovendi van onze vakgroep.  
           that are all the bursary.students of our department  
       a'. <sup>??</sup>Zij zijn al de beurspromovendi van onze vakgroep.  
           they are all the bursary.students of our department  
       b. Dat zijn alle drie/<sup>??</sup>allebei de beurspromovendi van onze vakgroep.  
           that are all three/all-both the bursary.students of our department  
       b'. <sup>\*?</sup>Zij zijn alle drie/allebei de beurspromovendi van onze vakgroep.  
           they are all three/all-both the bursary.students of our department  
       c. Dat zijn alle/\*beide beurspromovendi van onze vakgroep.  
           that are all/both bursary.students of our department  
       c'. Zij zijn <sup>?</sup>alle/\*beide beurspromovendi van onze vakgroep.  
           they are all/both bursary.students of our department

Two remarks are needed regarding (80c&c') with *beide*. First, these examples show that *beide* is impossible as a quantifier of a predicate nominal. Instead, *de beide* must be used in contexts of this type: *Dat/<sup>??</sup>Zij zijn de beide beurspromovendi van onze vakgroep*. This shows that, in contrast to what is the case in the templates in (79), *beide* and *de beide* do not freely alternate when they are construed as quantifiers of a predicative noun phrase. Second, example (80c) with *beide* must not be confused with (81), where *beiden* is construed as a °floating quantifier of the pronominal subject.

- (81) Dat/Zij zijn beiden beurspromovendi van onze vakgroep.  
       they are both bursary.students of our department  
       ‘They are both bursary students of our department.’

The two examples differ in intonation pattern: whereas *beide beurspromovendi* in (80c) forms a single intonation phrase, *beiden* in (81) is followed by a brief intonation break. Further, since the associate of the floating quantifier is [+HUMAN], the rules of orthography demand that an *-n* be added to *beide* in (81); cf. the introduction to Section 7.1.4.

7.1.3.3. *Distribution as adjuncts*

The distribution of *al* phrases in adjunct positions is restricted to phrases that function as temporal modifiers. In the case of bare *al*, the adverbial phrases in question can be headed by the singular noun *tijd* ‘time’ (82a) or by the plural nouns shown in (82b). The determiner used is preferably the distal demonstrative *die*; although the proximate demonstrative *deze* and the definite article *de* also occur, they sound marked, although the definite article is pretty common when the noun phrase is modified by, e.g., a relative clause, as in *al de keren dat hij hier was* ‘all the times that he was here’; see 3.3.2.2.5 for the use of singular relative pronoun *dat* in this example instead of the plural relative pronoun *die*.

- (82) a. Hij zat al *die*/?*deze*/?*de* tijd niks te doen.  
           he sat all that/this/the time nothing to do  
           ‘He was doing nothing all that time.’  
       b. Hij zat al *die*/?*deze*/?*de* keren/uren/dagen/jaren niks te doen.  
           he sat all those/these/the times/hours/days/years nothing to do  
           ‘He was doing nothing during all those occasions/hours/days/years.’

For the other forms only the plural nouns are possible, if any are possible at all. The acceptability of adjunct construal varies substantially from case to case; simplex *alle* in (83b) is fine with all plural nouns listed, but other alternants pick out only one or two. In (83a), the determiner used is normally also the distal demonstrative *die*, although proper contextualization may render *alle twee/allebei de keren* felicitous.

- (83) a. Hij zat *alle twee/allebei die* keren/?uren/?dagen/?jaren niks te doen.  
           he sat all two/all-both those times/hours/days/years nothing to do  
       b. Hij zat *alle* keren/uren/dagen/jaren niks te doen.  
           he sat all times/hours/days/years nothing to do  
       c. Hij zat *beide* keren/?uren/dagen/?jaren niks te doen.  
           he sat both times/hours/days/years nothing to do

The examples in (84) show that, even though *alle* does combine with singular *tijd* in on the high degree reading ‘lots of time’ (cf. 7.1.1, sub III), it cannot be construed with *tijd* as a temporal adjunct. To express what the English prose translation of (84b) expresses, Dutch resorts to *al die tijd* in (82b). Alternatively, the constructions *heel de/die tijd* or *de/die hele tijd* ‘the whole time’ can be used; these are discussed in Section 7.2.

- (84) a. Ik heb *alle* tijd.  
           I have all time  
           ‘I have lots of time.’  
       b. \*Ik heb *alle* tijd niks zitten doen.  
           I have all time nothing sit do  
           ‘I was doing nothing all [of] the time.’

### 7.1.4. Distribution of *al* and *alle* as independent constituents

The previous sections mainly concentrated on the uses of *al*, *alle* + Num/*allebei* and *alle/beide* internal to the noun phrase. This section examines the independent uses of these forms as arguments, predicates and adjuncts, as well as their use as floating quantifiers. Before we start the discussion, we want to point out that there are two spellings for the independent occurrences of *alle* (and related forms like *beide* ‘both’). Unlike the modifier *alle*, independent *alle* can be written with a word final *-n*, which is mute in spoken Dutch. The distribution of the forms with and without *-n* depends on the feature [ $\pm$ HUMAN] of the referent or the associate. The examples in (85a&b) illustrate this for the use of *alle(n)* as a floating quantifier: *alle* is used with [-HUMAN] noun phrases and *allen* with [+HUMAN] noun phrases. *Alle* lacks the orthographic *-n*, however, when it is followed by a numeral, as in (85b’), which is related to the fact that *alle* modifies the numeral in this case and that it is the resulting complex phrase that is associated with the noun phrase; cf. the introduction to 7.1.2.2.

- (85) a. Ik heb die koekjes alle/\*allen opgegeten.  
           I have those cookies all prt.-eaten  
           ‘I have eaten those cookies all.’  
       b. Die jongens zijn allen/\*alle uitgenodigd.  
           those boys are all prt.-invited  
           ‘Those boys are all invited.’  
       b’. Die jongens zijn alle/\*allen twee uitgenodigd.  
           those boys are all two prt.-invited

Note that, in the above, [+HUMAN] should be understood as “consistently human”: conjunctions like *mannen en hun auto’s* ‘men and their cars’ take *alle*, not *allen*, as their independent/floating quantifier.

#### 7.1.4.1. Distribution as arguments

The distribution of bare *al* as an independent argument is extremely limited. *Alle* and *alle* + Num are more flexible in their independent uses, but here as well we find restrictions and surprising gaps in the paradigm. We will confine ourselves to giving a concise overview of the relevant data. This section concludes with some remarks on *alles* ‘everything’, which can only be used independently.

#### 1. Subject

Bare *al* does not occur independently as a subject; (86) show that it occurs neither with count nor with non-count nouns.

- (86) a. \*Wat die mensen betreft, al zijn reeds uitgenodigd.  
           what those people concerns all are already prt.-invited  
       b. \*Wat die artikelen betreft, al zijn net geplaatst.  
           what those articles concerns all are just placed  
       c. \*Wat die wijn betreft, al is reeds geprijsd.  
           what that wine concerns all is already priced

The (a)-examples in (87) and (88), featuring *alle* + Num/*allebei*, are grammatical, though not particularly good. Example (87b) shows that (87a) improves significantly when a pronoun is added to the left of the quantifier; cf. also Section 7.1.2.2.1, sub II. Example (88b) is still marked due to the fact that strong pronouns cannot readily be used to refer to [-HUMAN] entities; cf. Section 5.2.1.1.5. The (c)-examples, in which a plural pronoun is inserted to the right of the finite auxiliary, are fully acceptable; cf. Section 7.1.4.3 on floating quantifiers for more discussion.

- (87) • Discourse topic: two favorite friends
- ?? *Alle twee/Allebei zijn reeds uitgenodigd.*  
all two/all-both are already prt.-invited
  - Zij alle twee/allebei zijn reeds uitgenodigd.*  
they all two/all-both are already prt.-invited
  - Alle twee/Allebei zijn ze reeds uitgenodigd.*  
all two/all-both are they already prt.-invited
- (88) Discourse topic: two articles on determiners
- ?? *Alle twee/Allebei zijn net geplaatst.*  
all two/all-both are just placed
  - ?? *Zij alle twee/allebei zijn net geplaatst.*  
they all two/all-both are just placed
  - Alle twee/Allebei zijn ze net geplaatst.*  
all two/all-both are they just placed

The examples in (89) show that *alle(n)* and *beide(n)* with [+HUMAN] and [-HUMAN] antecedents do not just differ in orthography but also in syntactic distribution; whereas (89a) is formal but grammatical, (89b) is awkward. The contrast between (89b) and (89c) further shows that within the class of non-human referents a distinction should be made between plural count and substance nouns; when *alle* takes a substance noun as its referent, the result is entirely unacceptable.

- (89) a. *Wat die mensen betreft, allen/beiden zijn reeds uitgenodigd.*  
what those people concerns all/both are already prt.-invited
- b. ?? *Wat die artikelen betreft, alle/beide zijn reeds geplaatst.*  
what those articles concerns all/both are already placed
- c. \**Wat die wijn betreft, alle is reeds geprijsd.*  
what that wine concerns all is already priced

The split between *allen/beiden* and *alle/beide* in (89) resembles the one found between the same elements used as quantifiers of pronominal noun phrases; cf. Section 7.1.2.2.2, sub IID. Note that primeless (89b) improves considerably when a plural pronoun is placed to the right of the finite auxiliary; see Section 7.1.4.3 on floating quantifiers for discussion.

## II. Direct/indirect object

Bare *al* does not occur independently as a direct or indirect object, as shown by the primeless and primed examples of (90), respectively.

- (90) a. \*Wat die mensen betreft, ik heb al reeds uitgenodigd.  
 what those people concerns I have all already prt.-invited  
 a'. \*Wat die mensen betreft, ik heb al reeds een uitnodiging gestuurd.  
 what those people concerns I have all already an invitation sent  
 b. \*Wat die artikelen betreft, ik heb al net geplaatst.  
 what those articles concerns I have all just placed  
 b'. \*Wat die artikelen betreft, ik heb al net een plaats gegeven.  
 what those articles concerns I have all just a place given  
 c. \*Wat die wijn betreft, ik heb al reeds geprijsd.  
 what that wine concerns I have all already priced  
 c'. \*Wat die wijn betreft, ik heb al reeds een prijskaartje gegeven.  
 what that wine concerns I have all already a price.tag given

Comparable examples with *alle* + Num and *allebei* seem marked but grammatical; furthermore, there appears to be a slight contrast between the direct and indirect object examples for some speakers, the former being somewhat worse than the latter as is shown by the contrast between, respectively, the (a)- and (b)-examples in (91) and (92). Once again, examples like these become fully acceptable when a pronoun or noun phrase is added to the left of the quantifier; cf. Section 7.1.4.3 on floating quantifiers for discussion.

- (91) • Discourse topic: two favorite friends  
 a. <sup>??</sup>Ik heb alle twee/allebei reeds uitgenodigd.  
 I have all two/all-both already prt.-invited  
 b. <sup>?</sup>Ik heb alle twee/allebei reeds een uitnodiging gestuurd.  
 I have all two/all-both already an invitation sent
- (92) • Discourse topic: two articles on determiners  
 a. <sup>??</sup>Ik heb alle twee/allebei net geplaatst.  
 I have all two/all-both just placed  
 b. <sup>?</sup>Ik heb alle twee/allebei net een plaats gegeven.  
 I have all two/all-both just a place given

The [ $\pm$ HUMAN] contrast, which we have already signaled in connection with the data in (89), re-emerges in the *alle(n)* and *beide(n)* cases in (93) and (94): the [-HUMAN] examples in (94) are systematically worse than the [+HUMAN] ones in (93). As in the subject examples, the use of substance nouns in (94b&b') is entirely impossible. These cannot be saved by adding a pronoun, unlike the count noun examples in the (a)-examples in (94), which become fully acceptable when a plural pronoun is added to the left of the quantifier; cf. Section 7.1.4.3. on floating quantifiers.

- (93) • Discourse topic: a certain number of friends  
 a. Ik heb allen/beiden reeds uitgenodigd.  
 I have all/both already prt.-invited  
 b. Ik heb allen/beiden reeds een uitnodiging gestuurd.  
 I have all/both already an invitation sent

- (94) a. <sup>??</sup>Wat die artikelen betreft, ik heb alle/beide net geplaatst.  
           what those articles concerns I have all/both just placed  
       a'. <sup>??</sup>Wat die artikelen betreft, ik heb alle/beide net een plaats gegeven.  
           what those articles concerns I have all/both just a place given  
       b. \*Wat die wijn betreft, ik heb alle reeds geprijsd.  
           what that wine concerns I have all already priced  
       b'. \*Wat die wijn betreft, ik heb alle reeds een prijskaartje gegeven.  
           what that wine concerns I have all already a price.tag given

### III. Object of preposition

It is impossible for bare *al* to be used in the examples in (95), the prepositional counterparts of the double object constructions in the primed examples in (90), where *al* is the object of the preposition *aan*.

- (95) a. \*Ik heb reeds een uitnodiging aan al gestuurd. [ +HUMAN]  
           I have already an invitation to all sent  
       b. \*Ik heb net een plaats aan al gegeven. [-HUMAN]  
           I have just a place to all given  
       c. \*Ik heb reeds een prijskaartje aan al gegeven. [-HUMAN]  
           I have already a price.tag to all given

Bare *al* normally does not occur as the object of other prepositions either. An idiomatic example which basically exhausts the possibilities is *het ergst van al* 'the worst of all'. This example has a more or less productive paradigm in the sense that the superlative adjective can in principle be replaced with any other superlative (cf. English *worst/best/most/... of all*). We can also mention the fixed expressions *al met al* 'all in all', *bovenal* 'above all' and *vooral* 'particularly/especially'.

*alle* + Num and *allebei*, grammatical variants of the examples in (95) can be constructed, although some speakers consider the examples in (96) less felicitous than their double object counterparts in (91b) and (92b).

- (96) a. <sup>?</sup>Ik heb reeds een uitnodiging aan alle twee/allebei gestuurd. [ +HUMAN]  
           I have already an invitation to all two/all-both sent  
       b. <sup>?</sup>Ik heb net een plaats aan alle twee/allebei gegeven. [-HUMAN]  
           I have just a place to all two/all-both given

The examples in (97) show that *alle(n)* and *beide(n)* can occur as the complement of *aan* when they have a [ +HUMAN] referent, but that the result is somewhat marginal when they have a plural [-HUMAN] referent; as before, it is impossible for independent *alle* to be associated with a substance noun. There is no discernible contrast between the examples in (97) and their double object counterparts in (93b) and the primed examples in (94). The judgments are more or less the same, when *alle(n)* and *beide(n)* function as the complement of some other preposition.

- (97) a. Ik heb reeds een uitnodiging aan allen/beiden gestuurd.  
           I have already an invitation to all/both sent  
       b. <sup>??</sup>Wat die artikelen betreft, ik heb net een plaats aan alle/beide gegeven.  
           what those articles concerns I have just a place to all/both given

- c. \*Wat die wijn betreft, ik heb reeds een prijskaartje aan alle gegeven.  
 what that wine concerns I have already a price.tag to all given

While the result of independent forms in subject, direct object and indirect object positions can systematically be improved by insertion of a plural pronoun to the left of the quantifiers, a more complex picture emerges when they function as the complement of a PP. The (a)-examples in (98) show that the [+HUMAN] examples in (96a) and (97a) become perfectly grammatical by inserting the strong pronoun *hen*, but not when we insert the weak pronoun *ze*. This peculiar fact that the weak pronoun cannot be used when the quantifier is the complement of a preposition probably also accounts for the fact, illustrated in the (b)-examples in (98), that insertion of a plural pronoun does not improve the [-HUMAN] cases in (96b) and (97b), given that strong pronouns cannot be used to refer to [-HUMAN] entities; cf. Section 5.2.1.1.5, as well as Sections 7.1.2.2.1, sub II, and 7.1.2.2.2, sub II).

- (98) a. Ik heb reeds een uitnodiging aan hen/\*ze alle twee/allebei gestuurd.  
 I have already an invitation to them all two/all-both sent  
 a'. Ik heb reeds een uitnodiging aan hen/\*ze allen/beiden gestuurd.  
 I have already an invitation to them all/both sent  
 b. \*Ik heb net een plaats aan hen/ze alle twee/allebei gegeven.  
 I have just a place to them all two/all-both given  
 b'. \*Ik heb net een plaats aan hen/ze alle/beide gegeven.  
 I have just a place to them all/both given

The contrast in acceptability between the strong and weak form of the pronoun in the (a)-examples suggests that the modifier must form a constituent with the pronoun when it functions as the complement of a PP; cf. Section 7.1.2.2.2, sub IID. This seems to be confirmed by the fact that scrambling or topicalization of the PP must pied pipe the quantifier. This is illustrated in (99) for (98a) with *allen*.

- (99) a. Ik heb aan hen <allen> reeds een uitnodiging <\*allen> gestuurd.  
 I have to them all already an invitation sent  
 b. Aan hen <allen> heb ik reeds een uitnodiging <\*allen> gestuurd.  
 to them all have I already an invitation sent

From this we can safely conclude that the modifier and the pronoun form a constituent. This may also account for the fact that examples like (100) featuring the pronominal PP *waar ... aan* as indirect object are ungrammatical when the quantifier is present.

- (100) a. mijn vrienden waar ik een uitnodiging aan (\*allen) gestuurd heb  
 my friends where I an invitation to all sent have  
 'my friends to whom I have sent an invitation'  
 b. de artikelen waar ik net een plaats aan (\*alle) gegeven heb  
 the articles where I just a place to all given have  
 'the article to which I have just given a place'

The reason for the ungrammaticality is that R-pronominalization is excluded when the pronoun is part of a larger phrase. This is illustrated for the existentially



quantified [-HUMAN] pronoun *iets* by the examples in (101). The (a)-examples show that when *iets* is the complement of a preposition, R-pronominalization is preferred. The (b)-examples, on the other hand, show that pronominalization is impossible when the pronoun *iets* is part of the so-called partitive genitive construction *iets hards* 'something hard': R-pronominalization and °R-extraction are excluded both with and without pied piping of the genitival adjective *hards*. This suggests that the examples in (100) are excluded because the quantifier *alle(n)* and the R-pronoun *waar* also form a single phrase that functions as the complement of a PP.

- (101) a. <sup>?</sup>Hij liep        tegen iets                aan.  
           he walked against something prt.  
           'He walked into something.'
- a'. Hij liep        ergens        tegen        aan.  
           he walked somewhere against prt.
- b. Hij liep        tegen iets hards            aan.  
           he walked against something hard prt.  
           'He walked into something hard.'
- b'. \*Hij liep        ergens        <hards> tegen <hards> aan.  
           he walked somewhere hard        against        prt.

#### IV. A remark on *alles* 'everything'

At the end of this overview of the use of *al*, *alle* + Num and simplex *alle* as arguments, we want to draw attention to one form of *al* which has not figured in the discussion so far, because it does not occur as a modifier of the noun phrase: the quantifier *alles* 'everything', which can only be used independently. The examples in (102) show that, like its English counterpart *everything*, *alles* can occur in all regular argument positions (despite the fact that, historically seen, *alles* is a genitival, neuter form of the quantifier *al*, whence the *-es* ending).

- (102) a. Alles is geprijsd.  
           all    is priced
- b. Ik heb alles geprijsd.  
           I    have all    priced
- c. Ik heb alles een prijskaartje gegeven.  
           I    have all    a price.tag    given
- d. Ik heb aan alles een prijskaartje gegeven.  
           I    have to all    a price.tag    given

The phrase *van alles* 'all kinds of things' can be also used as a nominal argument, and it is plausible to assume that this phrase is related to the pseudo-partitive construction *van die N* 'such N', which can likewise be used as a nominal argument; cf. Section 4.1.1.6.1. The two constructions are at least similar in that they are both indefinite, which is clear from the fact, illustrated in (103a&a'), that they may occur as the subject in an expletive *er* construction. Note that, like *alles* in (102a), the phrase *van alles* triggers singular agreement on the verb. The examples in (103b-d) finally show that, just like the pseudo-partitive construction, the *van alles* phrase occurs in all regular argument positions. This is shown in (103b-d).

- (103) a. Er ligt van alles op de grond.  
 there lies all kinds of thing on the floor  
 'There were all kind of things lying on the floor.'
- a'. Er liggen van die scherpe spijkers op de weg.  
 there lie such sharp nails on the road  
 'There were such sharp nails lying on the road.'
- b. Ik heb van alles gekocht.  
 I have all kind of things bought
- c. Ik heb van alles een extra schoonmaakbeurt gegeven.  
 I have all kind of things an additional cleaning given
- d. Ik heb over van alles nagedacht.  
 I have about all kind of things prt.-thought  
 'I have reflected on all kinds of things.'

#### 7.1.4.2. Distribution as predicates and adjuncts

In present-day Dutch, *al* does not occur independently as a predicate nominal; the only exception is the poetic register, where *al* preceded by a possessive pronoun can be used as a predicate nominal: *Jij bent mijn al* 'You are my everything'. The forms *alle* + Num/*allebei* and *alle(n)/beide(n)* do not occur as predicates either. The only form of *al* that can be used as a predicate nominal is the quantifier *alles*, whose argument functions are illustrated in (102). Note that in (104b) *alles* cannot be replaced with spurious PP *van alles*: \**Dat is van alles*.

- (104) a. \**Dat is/zijn al/alle twee/allebei/alle(n)/beide(n)*.  
 that is/are all/all two/all-both/all/both
- b. *Dat is/\*zijn alles*.  
 that is/are all  
 'That is all.'

Used as a nominal predicate, *alles* in (104b) is restricted to singular subjects. This is not surprising given the singularity of the form *alles*, which is also evident from the fact that it triggers singular verb agreement in example (102a): cf. *Alles is/\*zijn geprijsd* 'All is/are priced'. An exception to this restriction is an example like (105) where an evaluative *voor*-PP is added: in this case, the verb agrees with the plural subject of the construction.

- (105) *Mijn kinderen zijn alles voor mij*.  
 my children are all to me  
 'My children are everything to me.'

Though bare *al* does show up as an adjunct in (106), there is no transparent link between the use of *al* in this example (where it means "already") and that of the quantifier *al* in the examples discussed so far. The adverb *al* 'already' is an abbreviated form of *alreeds* 'already'. Another complex adverbial form, in which *al* seems to act as a kind of premodifier, is *alsmaar* 'constantly'.

- (106) *Het is al laat*.  
 it is already late

7.1.4.3. *Distribution as floating quantifiers*

Floating quantifier are quantifiers that are associated to noun phrases occurring elsewhere in the sentence, and with which they do not form a syntactic constituent. The notion of a floating quantifier suggests an analysis according to which the quantifier and its noun phrase associate underlyingly form a constituent, which is split up in the course of the syntactic derivation. Here, however, the notion of floating quantifier will be used as a pre-theoretical notion. In fact, we will come across several indications that at least in Dutch, floating quantifiers should not be analyzed in terms of movement.

I. *Al*

In present-day Dutch it is next to impossible to use bare *al* as a floating quantifier (although it is used like this in at least some Flemish dialects). In idioms one can find relics of this pattern: in (107) *al* is a floating quantifier associated to the third singular neuter pronoun in the surface subject position. The pattern cannot be productively extended beyond these idiomatic expressions.

- (107) a. Het is niet *al/alles* goud wat er blinkt.  
           it is not all gold what there glimmers  
       b. Het is mij *al* gelijk.  
           it is me all the.same

Note that in the idiom in (107a), *al* alternates with the quantifier *alles*. This is, however, the only context in which *alles* is found as a floating quantifier in present-day Dutch. As is shown by (108), *alles* may combine with the singular demonstrative pronouns *dit/dat* to form the noun phrase *dit/dat alles* (cf. example (78)), but it cannot be used as a floating quantifier associated with such pronouns.

- (108) a. Dit/Dat <*alles*> is <\*<*alles*> overbodig.  
           this/that all is superfluous  
       b. Hij heeft dit/dat <*alles*> gisteren <\*<*alles*> gezien.  
           he has this/that all yesterday seen

II. *Alle + Num and allebei*

*Alle + Num* and *allebei* are felicitous floating quantifiers with both animate and inanimate a noun phrase associates. As is shown in (109) and (110), the associate of the floating quantifier can be either a complex noun phrase or a pronoun. The primed examples show, however, that the two types of associate differ in that the noun phrase must precede the floating quantifier, whereas the pronoun may also follow it when the floating quantifier is placed in clause-initial position. Note in passing that, while *alle + Num* within the noun phrase can be spelled either as one single word or as two separate words (see the introduction to Section 7.1.2.2), there seems to be a tendency to spell the two elements as a single word when it is used as a floating quantifier.

- (109) a. Die mensen/*Ze* zijn gisteren alletwee/allebei uitgenodigd.  
           those people/they are yesterday all-two/all-both prt.-invited  
       a'. Alletwee/Allebei zijn ze/\*die mensen gisteren uitgenodigd.

- b. Ik heb die mensen/ze gisteren alletwee/allebei uitgenodigd.  
 I have those people/them yesterday all-two/all-both prt.-invited
- b'. Alletwee/Allebei heb ik ze/\*die mensen gisteren uitgenodigd.
- (110) a. Die artikelen/Ze zijn gisteren alletwee/allebei geplaatst.  
 those articles/they are yesterday all-two/all-both placed
- a'. Alletwee/Allebei zijn ze/\*die artikelen gisteren geplaatst.
- b. Ik heb die artikelen/ze gisteren alletwee/allebei geplaatst.  
 I have those articles/them yesterday all-two/all-both placed
- b'. Alletwee/Allebei heb ik ze/\*die artikelen geplaatst.

As floating quantifiers *Alle* + Num and *allebei* can be easily distinguished from their use as noun-phrase-internal modifying forms. As noun phrase modifiers they must be left-adjacent to the determiner, as illustrated for *alletwee* in (111) and (112), whereas as floating quantifiers they normally follow their associate, as in the primeless examples above.

- (111) a. <Alletwee/bei> die mensen <\*alletwee/bei> heb ik gisteren uitgenodigd.  
 all-two/-both those people have I yesterday prt.-invited
- b. Ik heb <alletwee/bei> die mensen <\*alletwee/bei> gisteren uitgenodigd.  
 I have all-two/-both those people yesterday prt.-invited
- (112) a. <Alletwee/bei> die artikelen <\*alletwee/bei> heb ik gisteren geplaatst.  
 all-two/-both those articles have I yesterday placed
- b. Ik heb <alletwee/bei> die artikelen <\*alletwee/bei> gisteren geplaatst.  
 I have all-two/-both those articles yesterday placed

The examples in (111b) and (112b) cannot be interpreted as containing floating quantifiers: the acceptable orders involve modification of the noun phrase, which is also clear from the fact that the quantifier must be left-adjacent to the determiner, that is, cannot be separated from it by, e.g., an adverbial phrase. This shows that the floating quantifier cannot be scrambled across certain adverbs, such as modal and time adverbs. This does not mean, however, that floating quantifiers can never precede adverbs, since they certainly can (or actually must) precede °VP adverbs like *vriendelijk* 'kindly' and *zorgvuldig* 'meticulously' in (113).

- (113) a. Jan heeft die mensen gisteren alletwee/allebei vriendelijk begroet.  
 Jan has those people yesterday all-two/all-both kindly greeted
- b. Jan heeft die artikelen gisteren alletwee/allebei zorgvuldig gelezen.  
 Jan has those articles yesterday all-two/all-both meticulously read

As illustrated in the primeless examples of (114), the floating quantifiers *alle* + Num and *allebei* can take as their associates independently quantified noun phrases, both animate and inanimate. The judgments on the primed examples seem to vary from speaker to speaker; the fact that many speakers consider these examples marked is probably due to the fact that *vele* denotes an indeterminate amount, which conflicts with the precision expressed by the numeral *dertig* 'thirty'.

- (114) a. Ik heb die twee mensen alletwee/allebei uitgenodigd.  
           I have those two people all-two/all-both prt.-invited  
       a'. %Ik heb die vele mensen alledertig uitgenodigd.  
           I have those many people all-thirty prt.-invited  
       b. Ik heb die twee artikelen alletwee/allebei gelezen.  
           I have those two articles all-two/all-both read  
       b'. %Ik heb die vele artikelen alledertig gelezen.  
           I have those many articles all-thirty read

Note that the floating quantifiers differ markedly in this respect from the modifiers *alle* + Num and *allebei*, since the examples in (115) show that it is impossible for the latter to form a constituent with independently quantified noun phrases; cf. Section 7.1.2.2.1, sub II.

- (115) a. \*alletwee die twee mensen/artikelen  
           all-two those two people/articles  
       b. \*alledertig die vele mensen/artikelen  
           all-thirty those many people/articles

The contrast between (114) and (115) therefore suggests that floating quantifier constructions are not derived from some underlying structure in which the floating quantifier and its associate form as a single constituent. Of course, this argument is not decisive but in the next subsection, we will see how *alle(n)* and *beide(n)* provide additional, more robust evidence against such a “floating” approach.

### III. *Alle(n)* and *beide(n)*

When *alle(n)* and *beide(n)* are used as floating quantifiers, the orthographic *-n* forms *allen* and *beiden* go together with [+HUMAN] noun phrases, as in (116), and the “plain” forms with [-HUMAN] noun phrases, as in (117). The use of *alle(n)* and *beide(n)* as floating quantifiers is restricted to the more formal registers of the language; the spoken language typically prefers *allemaal* and *allebei*. The forms *alle(n)* and *beide(n)* behave just like the floating quantifiers *alle* + Num and *allebei*: as is shown by (116) and (117), the associate of the floating quantifier can be either a complex noun phrase or a pronoun, but the two types of associate differ in that the former must precede the floating quantifier, whereas the latter may follow it when the floating quantifier is placed in clause-initial position.

- (116) a. Die mensen/Ze zijn gisteren allen/beiden uitgenodigd.  
           those people/they are yesterday all/both prt.-invited  
       a'. Allen/Beiden zijn ze/\*die mensen gisteren uitgenodigd.  
       b. Ik heb die mensen/ze gisteren allen/beiden uitgenodigd.  
           I have those people/them yesterday all/both prt.-invited  
       b'. Allen/Beiden heb ik ze/\*die mensen gisteren uitgenodigd.
- (117) a. Die artikelen/Ze zijn alle/beide gisteren geplaatst.  
           those articles/they are all/both yesterday placed  
       a'. Alle/Beide zijn ze/\*die artikelen gisteren geplaatst.

- b. Ik heb die artikelen/ze gisteren alle/beide geplaatst.  
 I have those articles/them yesterday all/both placed  
 b'. Alle/Beide heb ik ze/\*die artikelen gisteren geplaatst.

The use of *alle(n)* and *beide(n)* as floating quantifiers can be readily distinguished from their use as noun-phrase-internal modifying forms. First, the examples in (118) show that a determiner is incompatible with these quantifiers used as modifiers, in contrast to what is the case with the floating quantifiers in (116) and (117). Second, the modifier must be left-adjacent to the determiner, whereas the floating quantifiers in (116) and (117) normally follow their associate. Third, in the case of [+HUMAN] noun phrases in (118a&a'), the orthographic *-n* cannot occur on the noun phrase internal modifiers, whereas it must be expressed on the floating quantifiers in (116).

- (118) a. Alle/Beide (\*die) mensen zijn uitgenodigd.  
 all/both those people are prt.-invited  
 a'. Ik heb alle/beide (\*die) mensen uitgenodigd.  
 I have all/both those people prt.-invited  
 b. Alle/Beide (\*die) artikelen zijn geplaatst.  
 all/both those articles are placed  
 b'. Ik heb alle/beide (\*die) artikelen gisteren geplaatst.  
 I have all/both those articles yesterday placed

The fact that *alle(n)* and *beide(n)* can be associated as floating quantifiers to noun phrases that they cannot form a syntactic constituent with casts more doubt on the “floating” analysis according to which floating quantifiers are base-generated inside the quantified nominal and split from it in the course of the derivation. This approach to floating quantifiers is also difficult to reconcile with the observation that the floating quantifiers *alle(n)/beide(n)* can be associated with independently quantified noun phrases. As was the case for *alle* + Num and *allebei* in (114), examples like (119) are acceptable, although the judgments on the primed examples may vary from person to person.

- (119) a. Ik heb die twee mensen allen/beiden uitgenodigd.  
 I have those two people all/both invited  
 a'. %Ik heb die vele mensen allen uitgenodigd.  
 I have those many people all invited  
 b. Ik heb die twee artikelen alle/beide gelezen.  
 I have those two articles all/both read  
 b'. %Ik heb die vele artikelen alle gelezen.  
 I have those many articles all read

The fact illustrated in (120) that it is impossible for the modifiers *alle* and *beide* to form a constituent with a numerically quantified noun phrase is therefore again a problem for the “floating” approach.

- (120) a. \*alle/beide die twee mensen/artikelen  
all/both those two people/articles  
b. \*alle/beide die vele mensen/artikelen  
all/both those many people/articles

7.1.5. A special case: Allemaal ‘all’

We conclude the discussion of *al/alle* with a description of the behavior of the form *allemaal*. Historically, *allemaal* is composed of the morphemes *al*, *te* and *maal*; *te* and *maal* together are semantically equivalent to *tezamen* and mean “together”. In the glosses we therefore render *allemaal* as “altogether” reflecting its historical origin. The form *allemaal* is assigned its own separate section because its properties diverge in several ways from those of the forms *al* and *alle* (+ Num). We will start the discussion in Section 7.1.5.1 with the use of *allemaal* as a modifier within the noun phrase. Section 7.1.5.2 will discuss the independent uses of *allemaal*.

7.1.5.1. The use of *allemaal* as a modifier of a noun phrase

The section discusses the use of *allemaal* as a modifier of the noun phrase. We will start by showing that this use is limited in the sense that it is only possible in bare (determiner-less) indefinite noun phrases. Subsection II will show that the modifier *allemaal* does not contribute universal quantification; this interpretation of *allemaal* is only found in its prototypical use as a floating quantifier, which will be discussed in Section 7.1.5.2.2. Subsection III will conclude with a discussion of the restrictions *allemaal* imposes on accompanying determiners and quantificational elements.

I. Distribution of *allemaal* inside the noun phrase

The use of *allemaal* as a modifier of the noun phrase is limited in the sense that it is only possible in bare (determiner-less) indefinite noun phrases: Table 9 shows that *allemaal* combines neither with singular count noun phrases, nor with plural noun phrases headed by a definite determiner (which is possible in, e.g., West-Flemish).

Table 9: *Allemaal* in noun phrases headed by a count noun

|            | SINGULAR                                          | PLURAL                                                              |
|------------|---------------------------------------------------|---------------------------------------------------------------------|
| DEFINITE   | * <i>allemaal het boek</i><br>altogether the book | * <i>allemaal de boeken</i><br>altogether the books                 |
| INDEFINITE | * <i>allemaal een boek</i><br>altogether a book   | <i>allemaal Øboeken</i><br>altogether books<br>‘all kinds of books’ |

*Allemaal* is also prohibited in noun phrases headed by pluralia tantum, like (121a), and in noun phrases headed by plurals that denote a conventionally fixed unit, like (121b).

- (121) a. \*allemaal tropen  
altogether tropics  
b. \*allemaal Verenigde Staten  
altogether United States

The examples in (122) show that *allemaal* readily allows construal with the bare non-count nouns in (122), and the same thing holds for the deverbal nouns in (123), with the exception of the nominal infinitive. Note that adding a definite or indefinite article to these examples will result in ungrammaticality.

- (122) • *Allemaal* in noun phrases headed by a non-count noun
- |    |            |                         |                   |
|----|------------|-------------------------|-------------------|
| a. | allemaal   | wijn/fruit/suiker/vlees | [substance nouns] |
|    | altogether | wine/fruit/sugar/meat   |                   |
| b. | allemaal   | vee/gevogelte           | [mass nouns]      |
|    | altogether | cattle/fowl             |                   |
| c. | allemaal   | ellende/verdriet/onzin  | [abstract nouns]  |
|    | altogether | misery/sorrow/nonsense  |                   |
- (123) • *Allemaal* in noun phrases headed by a deverbal noun
- |    |            |                                   |                      |
|----|------------|-----------------------------------|----------------------|
| a. | allemaal   | werk                              | [bare stem]          |
|    | altogether | work                              |                      |
| b. | allemaal   | gedoe/gezeur/ <sup>?</sup> gewerk | [GE-nominalization]  |
|    | altogether | fuss/nagging/work                 |                      |
| c. | *allemaal  | werken                            | [INF-nominalization] |
|    | altogether | work                              |                      |

Noun phrases modified by *allemaal* are typically weak, which is clear from the fact illustrated in (124) that, when used as a subject, they normally require the expletive *er* to be present. The primed examples of (124), in which the modified noun phrase is topicalized across the expletive, clearly show that *allemaal* forms a constituent with the noun following it (the °constituency test).

- (124) a. Er liggen allemaal boeken in de gang.  
           there lie   altogether books in the hall  
       a'. Allemaal boeken liggen \*(er) in de gang.  
           altogether books lie    there in the hall  
       b. Er valt allemaal stof op de grond.  
           there falls altogether dust on the floor  
       b'. Allemaal stof valt \*(er) op de grond.  
           altogether dust falls there on the floor

Having established that the only types of noun phrases that *allemaal* can form a constituent with are bare plurals and bare non-count nouns, we will move on to discuss the meaning of *allemaal* as a modifier of the noun phrase and the restrictions it imposes on other elements with the noun phrase.

## II. Semantics

Though *allemaal* can be used as a modifier in noun phrases headed by a plural count noun or a non-count noun, it must be noted that it does not contribute universal quantification in this case: an example like *allemaal boeken* cannot be rendered by means of “all books” in English. In this respect the dependent use of *allemaal* differs from its prototypical use as a floating quantifier, which is discussed in 7.1.5.2.2. Below, we will discuss the semantic contributions that dependent *allemaal* can make.



*A. Sorting (“all kinds/sorts of”)*

Examples like *allemaal boeken* with count nouns typically receive a “sorting” interpretation: “all kinds of books”; this reading is sometimes also available for the non-count nouns in (122), depending on context. Haeseryn et al. (1997) qualifies this usage of *allemaal* as typical for the informal register; it is indeed extremely widespread in spoken Dutch, and exceedingly rare in formal written language. On this “sorting” reading, *allemaal* can often be replaced with *allerlei* (or archaic *allerhande*), although the resulting examples involving a substance noun seem somewhat degraded.

- (125) a. *allerlei* Ø *boeken*  
all-sorts [of] books  
b. *allerlei* <sup>?</sup>*wijn*/<sup>?</sup>*fruit*/<sup>??</sup>*suiker*/<sup>??</sup>*vlees*  
all-sorts [of] wine/fruit/sugar/meat  
b'. *allerlei* *vee/gevogelte*  
all-sorts [of] cattle/fowl  
b''. *allerlei* *ellende/verdriet/onzin*  
all-sorts [of] misery/sorrow/nonsense

*B. High degree quantification (“lots of”)*

Just like *alle* (cf. Section 7.1.1, sub III), *allemaal* may receive a high degree interpretation. This is often the more natural interpretation for the substance nouns in (122). It seems that pragmatics and grammatical/semantic context may both affect the choice between the two readings in (126). For example, it seems that the expletive *er* construction favors the high degree interpretation.

- (126) a. *Ik heb allemaal fruit gekocht.*  
I have altogether fruit bought  
Possible reading: ‘I have bought all kinds/sorts of fruits.’  
Possible reading: ‘I have bought lots of fruits.’  
b. *Er ligt allemaal suiker op tafel.*  
there lies altogether sugar on the table  
Possible reading: ‘There’s lots of sugar lying on the table.’  
Impossible reading: ‘There are all sorts/kinds of sugar lying on the table.’

The high degree interpretation of *allemaal* is available for bare plurals as well, especially when used in existential/presentational *er* constructions; to obtain the “all kinds/sorts of” reading in (127b), *allerlei* will normally be used instead.

- (127) a. *Ik heb allemaal fouten gemaakt.*  
I have altogether mistakes made  
Possible reading: ‘I have made all sorts of mistakes.’  
Marginally possible reading: ‘I have made lots of mistakes.’  
b. *Er zitten allemaal fouten in de tekst.*  
there sit altogether mistakes in the text  
Possible reading: ‘There are lots of mistakes in the text.’  
Impossible reading: ‘There are all sorts of mistakes in the text.’

C. *Very high degree quantification* (“nothing but”)

The very high degree interpretation of *allemaal* can be paraphrased with the aid of *niets dan* ‘nothing but’. In Standard Dutch (but not in, e.g., West-Flemish), this reading is restricted to predicatively used abstract non-count nouns like *ellende* ‘misery’ and *onzin* ‘nonsense’; the examples in (128a) are typical cases of this interpretation of *allemaal*. It is not entirely clear, however, whether *allemaal ellende/onzin* must be construed as a constituent or not, or whether *allemaal* is a floating quantifier associated with the demonstrative *dat*. Topicalization, as in (128b&b’), does not give a robust result; neither example is particularly felicitous, but neither seems ungrammatical either. We will see in Section 7.1.5.2.2, however, that the nominal predicate can be replaced by an adjectival one (e.g., *Dat is allemaal erg raar* ‘That is all very strange’), which suggests that it is at least possible to interpret *allemaal* as a floating quantifier associated with *dat*.

- (128) a. *Dat is allemaal ellende/onzin!*  
           that is altogether misery/nonsense  
           ‘That is nothing but misery/nonsense!’  
       b. *?Allemaal ellende/onzin is dat!*  
       b’. *?Ellende/Onzin is dat allemaal!*

III. *Restrictions on accompanying determiners and quantificational elements*

The introduction to this section has shown that *allemaal* can only be construed with bare noun phrases in Standard Dutch. This was demonstrated only for articles, but it holds also for demonstratives and possessives. Occasionally, examples like (129a) can be found in which *allemaal* seems to form a constituent with a [+HUMAN] personal pronoun. It must be noted, however, that, insofar as (129a) is acceptable, it involves universal quantification: since this is the reading typically found with the floating quantifier *allemaal* in the primed examples in (129), this casts doubt on the assumption that we are dealing with a modifier; see Section 7.1.5.2.2 for more on the floating quantifier use of *allemaal*.

- (129) a. *? (Wat die kinderen betreft,) zij allemaal zijn erg slim.*  
           what those children concerns they altogether are very smart  
       a’. *Zij/Ze zijn allemaal erg slim.*  
           they are altogether very smart  
           ‘They are all very smart.’  
       b. *\* (Wat die problemen betreft,) zij allemaal zijn zeer ernstig.*  
           what those problems concerns they altogether are very serious  
       b’. *Ze zijn allemaal erg ernstig.*  
           they are altogether very serious  
           ‘They are all very serious.’

When we assume that we may dismiss examples like (129a) as irrelevant, we can maintain that *allemaal* can only form a constituent with bare plurals and bare non-count nouns. It must be noted, however, that these categories allow the insertion of the indefinite determiner-like elements *dat/dit/zulk soort* ‘such’ between *allemaal* and the noun phrase, albeit that for the majority of speakers these elements must be preceded by *van* in constructions like (130).

- (130) a. Ze kraamt allemaal <sup>%</sup>(van) dat/dit/zulk soort onzin uit.  
 she screams altogether of that/this/such sort nonsense prt.  
 'She is uttering lots of/nothing but such nonsense.'
- b. Er zitten allemaal <sup>%</sup>(van) dat/dit/zulk soort fouten in deze tekst.  
 there sit altogether of that/this/such sort mistakes in this text  
 'This text is full of such mistakes.'

The question that arises with respect to the examples with *van* is whether we are dealing with a partitive construction here. This question is difficult to answer with certainty, but if these are partitive constructions, they are anomalous in the sense that the felicity of *van* depends entirely on the presence of the indefinite determiner-like elements *dat/dit/zulk soort*; in the absence of these, the examples in (130) are ungrammatical.

- (131) a. \*allemaal van onzin  
 altogether of nonsense
- b. \*allemaal van fouten  
 altogether of mistakes

The ungrammatical examples in (131) can be salvaged by placing *die* between *van* and the noun, as shown in (132). These noun phrases instantiate the pseudo-partitive *van die N* construction discussed in Section 5.2.3.2.2, sub V, whose semantics is close to that of *zulke N* and can best be rendered in English as "such Ns".

- (132) a. allemaal van die onzin  
 altogether of such nonsense
- b. allemaal van die fouten  
 all-sorts of those (= such) mistakes

*Allemaal* thus differs from the other *al*-quantifiers in being the only one that can precede pseudo-partitive phrases, where it receives the "sorting" interpretation discussed in Section 7.1.5.1, sub IIA. Given that we have seen there that on this reading *allemaal* generally alternates with *allerlei*, it does not come as a surprise that examples (130b) and (132b) have grammatical counterparts featuring *allerlei*, as shown in (133); although some speakers may object to these examples, they occur frequently on the internet.

- (133) a. allerlei <sup>%</sup>(van) dat/dit/zulk soort fouten  
 all-sorts of that/this/such sort mistakes
- b. allerlei van die fouten  
 all-sorts of those (= such) mistakes

Finally, it can be noted that it is impossible for *allemaal* to be used as a modifier with noun phrases that are independently quantified, as shown in (134).

- (134) a. (\*allemaal) enige/sommige boeken  
 altogether some books
- b. (\*allemaal) veel/weinig boeken  
 altogether many/few books

- c. (\*allemaal) tien boeken  
altogether ten books
- d. (\*allemaal) elke/iedere wijn  
altogether every wine

#### IV. Allemaal, definiteness and inflection

Example (135) shows that the modifier *allemaal* does not behave like a definite determiner when it comes to the determination of adjectival inflection; the attributively used adjective *slim* cannot be inflected. In this respect *allemaal* exhibits the same behavior as the quantifier *alle* in the somewhat marginal example (71a) in Section 7.1.2.2.2, sub II, although the two cannot serve as each other's paraphrase; while *alle* in (71a) expresses universal quantification, *allemaal* in (135) has the "sorting" interpretation mentioned in Section 7.1.5.1, sub IIA.

- (135) Allemaal slim/\*slimme geknoei in de handel.  
altogether clever fiddling in the commerce  
'all sorts of clever fiddling in commerce'

Externally, noun phrases modified by *allemaal* also behave like weak noun phrases, which is evident from the fact that they can occur as the subject in expletive *er* constructions; cf. (126b) and (127b), repeated here as (136).

- (136) a. Er ligt allemaal suiker op tafel.  
there lies altogether sugar on the table  
'There's lots of sugar lying on the table.'
- b. Er zitten allemaal fouten in de tekst.  
there sit altogether mistakes in the text  
'There are lots of mistakes in the text.'

#### 7.1.5.2. The use of *allemaal* as an independent constituent

This section discusses the use of *allemaal* external to the noun phrase. We consider *allemaal* used as an independent syntactic constituent (argument, predicate and adjunct) as well as its prototypical use as a floating quantifier.

##### 7.1.5.2.1. Distribution as argument and predicate

*Allemaal* cannot readily appear as an argument on its own. It is unacceptable as an argument of the verb, although it can marginally be used as the complement of a preposition provided that its implicit antecedent is animate (preferably human); see the contrast between (137d) and (138d).

- (137) • Discourse Topic: a number of friends
- a. \*Allemaal zijn uitgenodigd.  
altogether are invited
  - b. \*Hij heeft allemaal uitgenodigd.  
he has altogether invited
  - c. \*Hij heeft allemaal een uitnodiging gestuurd.  
he has altogether an invitation sent
  - d. ?Hij heeft een uitnodiging aan allemaal gestuurd.  
he has an invitation to altogether sent

- (141) a. Die mensen/Zij zijn gisteren allemaal uitgenodigd.  
these people/they are yesterday altogether invited  
b. Hij heeft die mensen/hen/ze gisteren allemaal uitgenodigd.  
he has those people/them yesterday altogether invited  
c. Hij heeft die mensen/hun/ze gisteren allemaal een uitnodiging gestuurd.  
he has those people/them yesterday altogether an invitation sent

- (142) a. Die boeken/*Ze* zijn gisteren allemaal verkocht.  
 those books/they are yesterday altogether sold  
 b. Hij heeft die boeken/*ze* gisteren allemaal verkocht.  
 he has those books/them yesterday altogether sold  
 c. Hij heeft die boeken/*ze* gisteren allemaal zijn fiat gegeven.  
 he has those books/them yesterday altogether his okay given

As with the other floating quantifiers, *allemaal* must follow its associate, unless it is placed in sentence-initial position and its associate is a weak pronoun; the examples in (143) and (144) are all degraded with the noun phrase *die mensen/boeken* 'these people/books'.

- (143) a. Allemaal zijn *ze*/\**die mensen* gisteren uitgenodigd.  
 b. Allemaal heeft hij *ze*/<sup>3</sup>*hen*/\**die mensen* gisteren uitgenodigd.  
 c. Allemaal heeft hij *ze*/<sup>3</sup>*hun*/\**die mensen* gisteren een uitnodiging gestuurd.  
 (144) a. Allemaal zijn *ze*/\**die boeken* gisteren verkocht.  
 b. Allemaal heeft hij *ze*/\**die boeken* gisteren verkocht.  
 c. Allemaal heeft hij *ze*/\**die boeken* gisteren zijn fiat gegeven.

That we are dealing with floating quantifiers in (143) and (144) is clear from the fact that the quantifier and its associate are not adjacent. Actually there is not much chance to mistake the floating quantifier *allemaal* as a modifier, since the latter use is not possible for *allemaal* when the noun phrase contains a determiner; cf. Table 9. This is demonstrated again by the examples in (145): since the noun phrase and the quantifier cannot simultaneously occupy the clause-initial position, we can safely conclude that they do not form a constituent. This shows again that the "quantifier float" terminology should be interpreted strictly metaphorically.

- (145) a. \*<Allemaal> die mensen <allemaal> zijn gisteren uitgenodigd.  
 altogether those people are yesterday invited  
 b. \*<Allemaal> die boeken <allemaal> zijn gisteren verkocht.  
 altogether those books are yesterday sold

However, recall from the discussion of the examples in (129) that the data are not so clear for pronouns. Although marked, example (146a) suggests that it is at least marginally possible for *allemaal* to function as a modifier of a strong pronoun: *allemaal* and the pronoun can be placed together in clause-initial position (the °constituency test). The examples in (146b&c) show the same point as (146a) given that floating quantifiers normally cannot be scrambled across the adverb *gisteren*; cf. the discussion of the examples in (111) and (112).

- (146) a. Zij <<sup>??</sup>allemaal> zijn gisteren <allemaal> uitgenodigd.  
 they all are yesterday prt.-invited  
 b. Hij heeft hen <<sup>??</sup>allemaal> gisteren <allemaal> uitgenodigd.  
 he has them all yesterday prt.-invited  
 c. Hij heeft hun <<sup>??</sup>allemaal> gisteren <allemaal> een uitnodiging gestuurd.  
 he has them all yesterday an invitation sent

Of course, the quantifier *allemaal* is not able to form a constituent with a weak pronoun. We have seen in our discussion of *alle* in Section 7.1.2.2.2, sub IID, that this requires the pronoun to be strong.

- (147) a. Ze <\*allemaal> zijn gisteren <allemaal> uitgenodigd.  
           they all are yesterday prt.-invited  
       b. Hij heeft ze <\*allemaal> gisteren <allemaal> uitgenodigd.  
           he has them all yesterday prt.-invited  
       c. Hij heeft ze <\*allemaal> gisteren <allemaal> een uitnodiging gestuurd.  
           he has them all yesterday an invitation sent

As in the case of all other *al*-quantifiers, the associate of the floating quantifier *allemaal* can be independently quantified, although some people may object to the primed examples for pragmatic reasons.

- (148) a. Ik heb die dertig mensen gisteren allemaal ontmoet.  
           I have those thirty people yesterday altogether met  
       b. %Ik heb die vele mensen gisteren allemaal ontmoet.  
           I have those many books yesterday altogether met  
       (149) a. Ik heb die dertig boeken gisteren allemaal afgestoft.  
               I have those thirty books yesterday altogether dusted  
           b. %Ik heb die vele boeken gisteren allemaal afgestoft.  
               I have those many books yesterday altogether dusted

In this case, however, this fact cannot be used to argue against the “floating” approach, given that the examples in (150) are unacceptable for independent reasons; cf. the discussion of (145). Note in passing that our judgment on (150b) diverges from the one given in Coppens (1991: 133), who assigns it a mere question mark; our informants, however, rejected the two examples in (150) categorically.

- (150) a. \*allemaal die dertig mensen/boeken  
           altogether those thirty people/books  
       b. \*allemaal die vele mensen/boeken  
           altogether those many people/books

As is shown in (151), the floating quantifier *allemaal* seems freer than the other types of *al*-quantifiers in being able to take the neuter pronoun *het* ‘it’, the singular demonstratives *dit/dat* ‘this/that’, and the interrogative pronoun *wat* ‘what’ as its associate.

- (151) a. Het/Dit is allemaal/\*alle/\*allebei/\*beide verkocht.  
           it/this has.been altogether/all/all-both/both sold  
           ‘It has all been sold.’  
       b. Wat heb je allemaal/\*alle/\*allebei/\*beide gelezen?  
           what have you altogether/all/all-both/both read  
           ‘What sort of things did you read?’

Note that, unlike the personal pronouns in (146), these pronouns certainly cannot be combined with the modifier *allemaal*: *\*Het allemaal is verkocht*; *\*Wat allemaal*

*heb je gelezen?* At first sight this seems to constitute an argument against the “floating” approach, although it must be pointed out that there are reasons to assume that the function of *allemaal* in these examples differs from that in the examples discussed earlier. First, it seems that *allemaal* can be used with an adverbial function: example (152a) seems to favor a reading in which *het/dit* refers to a set of entities which are all read, but it may also refer to a single entity which is fully read, a reading which is the only possible one for example (152b), featuring the adverbial *helemaal*.

- (152) a. Ik heb het/dit gisteren allemaal gelezen.  
           I have it/this yesterday altogether read  
       b. Ik heb het/dit gisteren helemaal gelezen.  
           I have it/this yesterday completely read

Second, the semantic contribution made by *allemaal* in the *wh*-constructions in (151) differs from ordinary universal quantification, and it can be replaced with preservation of meaning by *zoal* ‘(what) for instance/among other things’ (lit.: so-all). This suggests that we can classify the use of *allemaal* in (151) as adverbial. If this is indeed the case, *allemaal* is the only *al* form that can be construed both as an adverb and as a floating quantifier.

## II. Complement of PP

Example (153a) shows that adding an associate to the marginal example (137d) gives rise to a more or less acceptable result when the associate is a complex noun phrase or a strong pronoun, but completely unacceptable when it is a weak pronoun. Adding an associate to the ungrammatical example in (138d), on the other hand, does not improve the result.

- (153) a. Hij heeft een uitnodiging aan <sup>?</sup>die mensen/hen/\*ze allemaal gestuurd.  
           he has an invitation to those people/them/them altogether sent  
       b. \*Hij heeft aan die boeken/ze allemaal zijn fiat gegeven.  
           he has to those books/them altogether his okay given

The examples in (153) show that there exists a contrast between [+HUMAN] and [-HUMAN] associates of *allemaal*. A similar contrast was observed for *al* in (98b&b’). There we took the fact that the weak pronoun *ze* could not be used as evidence for the claim that the pronoun and the quantifier must form a constituent. This claim was further supported by the fact that scrambling and topicalization of the PP required pied piping of the quantifier. The examples in (153) seem to give a similar result with scrambling, as shown in (154a), but not with topicalization, as is shown in (154b); the quantifier *allemaal* can only be pied piped in the former case. But, actually, the situation is more complex: (154c) shows that the scrambled PP need not be adjacent to the quantifier, and (154d) shows that the PP can be topicalized provided that the quantifier occupies the same position as in (154c).

- (154) a. Hij heeft aan <sup>?</sup>die mensen/hen <allemaal> een uitnodiging <\*allemaal> gestuurd.  
       b. \*Aan die mensen/hen <allemaal> heeft hij een uitnodiging <allemaal> gestuurd.  
       c. <sup>(?)</sup>Hij heeft aan <sup>?</sup>die mensen/hen gisteren allemaal een uitnodiging gestuurd.  
       d. <sup>(?)</sup>Aan die mensen/hen heeft hij gisteren allemaal een uitnodiging gestuurd.



The data in (154) therefore suggest that *allemaal* can be generated either as part of the noun phrase or independently to the left of the base position of the PP; in the latter case the PP must be moved into some position to the left of the quantifier. Given this we may expect that °R-pronominalization will give rise to an acceptable result as well, provided that the R-pronoun is moved into a position to the left of the independent quantifier. Although the examples are marked, the results in (155) seem indeed acceptable.

- (155) a. <sup>(?)</sup>de mensen waar hij gisteren allemaal een uitnodiging aan stuurde  
           the people where he yesterday altogether an invitation to sent  
           ‘the people to whom he sent an invitation yesterday’  
       b. <sup>?</sup>de voorstellen waar hij gisteren allemaal zijn fiat aan gaf  
           the proposal where he yesterday altogether his okay to gave  
           ‘the proposals to which he gave his okay yesterday’

Given that (155a) with an indirect object sounds relatively marked, we provide two more natural examples in (156) involving PP-complements, which seem to be impeccable.

- (156) a. de dingen waar een manager allemaal aan moet denken  
           the things where a manager altogether of must think  
           ‘all the things that a manager has to think of’  
       b. de instrumenten waar hij allemaal op kan spelen  
           the instruments where he altogether on can play  
           ‘the instruments that he can play (on)’

### III. Predicate

In examples like (157a), taken from Perridon (1997: 185), it is not immediately clear whether *allemaal* is a floating quantifier belonging to the subject *wat je over mij vertelt* or a modifier belonging to the predicate nominal *leugens*.

- (157) Wat je over mij vertelt zijn allemaal leugens.  
           what you about me tell are altogether lies

Semantically, (157) is not on a par with (158a), in which the quantifier clearly modifies the noun phrase, and in which *allemaal* can best be rendered as ‘all sorts of’. It instead patterns with (158b), in which *allemaal* has a very high degree reading; it is nothing but lies that you have been telling about me.

- (158) a. Je vertelt allemaal leugens over mij.  
           you tell altogether lies about me  
       b. Het/Dit zijn allemaal leugens die je over mij vertelt.  
           it/this are altogether lies that you about me tell

However, as was discussed in Section 7.1.5.1, sub IIC, it is not clear that the very high degree quantifier is part of the noun phrase. Evidence that *allemaal* in (157) and (158b) can be construed as a floating quantifier with the pronominal subject as its associate is given in (159), in which the nominal predicate is replaced by an

adjectival one, which is, of course, not eligible for modification by *allemaal*; in these examples, at least, *allemaal* must be construed as a floating quantifier.

- (159) a. Wat je over mij vertelt, is allemaal erg raar.  
           what you about me tell is altogether very strange  
       b. Het/Dit is allemaal erg raar.  
           it is altogether very strange

#### 7.1.5.2.3. *The distribution of allemaal and allerlei contrasted*

One last point to add in connection with the independent and floating uses of *allemaal* is the fact that, in these uses, *allemaal* does not alternate with *allerlei*. All of the grammatical examples given in Section 7.1.5.2.2 with *allemaal* become unacceptable when *allerlei* replaces *allemaal*. In (160), we illustrate this with the aid of a number of concrete examples.

- (160) a. \*Wat die mensen betreft, hij heeft aan allerlei een uitnodiging gestuurd.  
           what those people concerns he has to all-sorts an invitation sent  
       b. \*Ik heb die boeken gisteren allerlei verkocht.  
           I have those books yesterday all-sorts sold  
       c. \*Ik heb het gisteren allerlei gelezen.  
           I have it yesterday all-sorts read

In this regard, independent and floating *allemaal* differ from *allemaal* in bare plural noun phrases, which can readily be replaced with *allerlei*, usually with preservation of meaning: *allemaal/allerlei boeken* ‘all kinds of books’. See also example (125) in Section 7.1.5.1, sub IIA.

## 7.2. The pre-determiner *heel* ‘all/whole’

This section is concerned with the forms and distribution of the modifier *heel*. This modifier can be found in the two word-order patterns in (161). The modifier *heel* in (161a) will be referred to as PRE-DETERMINER BARE *HEEL* since it is systematically uninflected and linearly precedes the determiner. The use of pre-determiner bare *heel* does not seem very common in everyday spoken Dutch; witness the fact that the *Woordenboek der Nederlandsche Taal* mentions that, even at the time when the lemma *heel* was written (1901-1912), the construction was found only in somewhat elevated and poetic registers. The modifier *heel* in (161b) will be referred to as POST-DETERMINER INFLECTIBLE *HEEL*, since it is inflected as an attributive adjective (cf. 3.2.1), and always follows the determiner.

- (161) a. heel de taart [pre-determiner bare *heel*]  
           all the cake  
       b. de hele taart [post-determiner inflectible *heel*]  
           the whole cake

The two cases in (161) differ in that, in present-day Dutch, only the post-determiner *heel* alternates with the morphological alternant *geheel*. This is shown in (162); cf. also Section 7.2.2.3. Furthermore, we will show later that post-determiner *heel* is ambiguous, and may receive a purely adjectival or a quantificational interpretation.

- (162) a. \*geheel de taart  
       b. de gehele taart

For completeness' sake, note that *heel* can also be used in other syntactic functions, for instance, as an °amplifier of an adjective, as in *een heel/hele lekkere taart* 'a very tasty cake', where *heel* is optionally adorned with the inflectional schwa typical of adjectival attributive modifiers. Examples like these will not be discussed here; see Section A3.1.2 for discussion of this use.

In (161), we glossed pre-determiner bare *heel* as "all" in order to distinguish it from post-determiner *heel* and to give recognition to the fact that there are syntactic and interpretative parallels between pre-determiner bare *heel* and pre-determiner bare *al*. Post-determiner inflectible *heel* will be systematically glossed as "whole" even where this gloss is semantically inappropriate, that is, both on its adjectival and its quantificational reading; when necessary, English prose translations will be provided to bring out the semantics of *heel* in the constructions under discussion.

Section 7.2.1 will start by addressing the semantics of *heel*, with the two syntactic patterns in (161) being discussed in separate sections. Section 7.2.2 will discuss the syntactic distribution of *heel* and its alternants within the noun phrase, and Section 7.2.3 the distribution of noun phrases modified by *heel* as a whole. Section 7.2.4 will conclude with a discussion of the independent uses of *heel*.

### 7.2.1. *Semantics of heel* 'all/whole'

This section discusses the semantics of *heel*. Section 7.2.1.1 will start by discussing pre-determiner bare *heel*. This is followed in Section 7.2.1.2 by a discussion of post-determiner inflectible *heel*, for which a further distinction must be made between the quantificational and the purely adjectival uses of *heel*. Since purely adjectival *heel* "whole/intact" behaves like a common attributive adjective, the focus will be on the quantificational type.

#### 7.2.1.1. *Pre-determiner bare heel*

This section discusses the meaning of pre-determiner bare *heel*. In Subsection I, we start with its core semantics, which is quantificational in nature. Subsection II will show, however, that pre-determiner *heel* can also be used to express condescension in clauses that contain implicit or explicit negation.

#### I. *Core semantics: exhaustive partitioning of structured units*

The core semantics of noun phrases with pre-determiner bare *heel* is quantificational in nature and can best be captured under the rubric of *exhaustive partitioning of structured units*; cf. Zwarts (1992: Ch. 7). What we mean by this is that *heel* gives an instruction to the addressee to partition the unit denoted by the head noun into all of its relevant subparts, and to select the sum total of these subparts as the reference of the noun phrase. The semantic characterization of *heel* just given can be decomposed into three elementary building blocks: it involves (i) a structured unit, (ii) a partitioning, and (iii) exhaustivity. Each of these aspects will be addressed below.

## A. Structured unit

The notion of *structured unit* itself consists of two subparts, viz. being structured and being a unit. The claim that the referent of the noun phrase must be “structured” can be illustrated with reference to the contrast between the examples in (163) involving proper nouns. A proper noun like *Europa* can readily be preceded by pre-determiner *heel*, because the geographical entity “Europe” is normally construed as constituting a structured set of basically equivalent objects, viz. member states. A proper noun like *Jan*, on the other hand, cannot be combined with *heel*, because a person is normally not seen as a structured homogeneous set of objects such as cells, organs or limbs.

- (163) a. heel Europa/Duitsland/Hongarije/Italië/Amsterdam  
           all Europe/Germany/Hungary/Italy/Amsterdam  
       b. <sup>\$</sup>heel Jan  
           all Jan

Example (164a) shows that the same thing is normally true for a noun phrase headed by a [+ANIMATE] common noun phrase like *de man* ‘the man’. However, once a context is provided which allows the animate noun phrase *de man* to refer to the set of a person’s limbs, as in (164b), a grammatical, though slightly marked, result arises. The examples in (164a&b) also show that a similar but somewhat stronger contrast can be found in [-ANIMATE] noun phrases like *zijn arm* ‘his arm’.

- (164) a. <sup>\$</sup>heel de man/zijn arm  
           all the man/his arm  
       b. Heel <sup>?</sup>de man/zijn arm zat onder de schrammen.  
           all the man/his arm sat under the scratches  
           ‘The man/His arm was profusely covered with scratches.’

Note that examples like (164b) alternate with sentences in which the semantics of *heel* is contributed by the adverb *helemaal* ‘altogether’: cf. *De man/Zijn arm/Jan zat helemaal onder de schrammen* ‘The man/his arm/Jan was completely covered with scratches’. *Helemaal* can also be used with proper nouns, which, even in the contexts given in (164b), give rise to a marginal result at best with *heel*, as will be clear from the contrast between (165a&b). The syntax of *helemaal* is discussed in Section 7.2.4.

- (165) a. <sup>\*?</sup>Heel Jan zat onder de schrammen.  
           all Jan sat under the scratches  
       b. Jan zat helemaal onder de schrammen.  
           Jans sat altogether under the scratches  
           ‘Jan was completely covered with scratches’

The fact that some noun phrases readily allow an interpretation as a structured unit with *heel*, whereas other noun phrases require a special context for this interpretation to become available suggests that it is the speaker’s conceptualization of the material world that is responsible for the difference: a proper noun like *Europa* is simply stored in the mental lexicon as a structured unit consisting of

member states, whereas a proper noun like *Jan* is stored as an atomic unit referring to some individual.

So far, we have focused on the requirement that the referent of the noun phrase must be structured, that is, be construed as consisting of several subparts. That the referent of the noun phrase must be a UNIT is highlighted by the interpretation of example (166a); the indirect object is conceived of as a unit, all of whose parts are affected equally and collectively by the event expressed by the verb phrase. The unit reading expressed by (166a) can be primed by means of the paraphrase in (166a'). In (166b), we find a similar example taken from the internet that involves a PP-complement; again it is possible to provide a paraphrase with *in z'n geheel*.

- (166) a. Ik heb heel het huis een opknapbeurt gegeven.  
 I have all the house a cleaning given  
 'I gave the entire house a cleaning.'
- a'. Ik heb het huis in z'n geheel een opknapbeurt gegeven.  
 I have the house in its whole a cleaning given  
 'I gave the house in its entirety a cleaning.'
- b. We bieden integrale zorg, die kijkt naar heel de mens en niet alleen  
 we offer complete care that looks at all the person and not only  
 naar lever, hart of nieren ...  
 at liver heart or kidneys
- b'. We bieden integrale zorg, die kijkt naar de mens in z'n geheel (en niet ...)  
 we offer complete care that looks at the person in its whole and not

The primeless examples in (166) contrast with the examples in (167), in spite of the fact that the syntactic function of the *heel* phrases in these examples is the same, viz. indirect object and complement of a PP-complement of the verb,

- (167) a. <sup>??</sup>Ik heb heel de film mijn volle aandacht gegeven.  
 I have all the movie my full attention given  
 'I gave the entire movie my full attention.'
- b. <sup>\*\*</sup>Ik heb aandachtig naar heel de film zitten kijken.  
 I have attentively to all the movie sit look  
 'I watched the entire movie attentively.'

The difference in acceptability between (166) and (167) therefore seems to be of a semantico-pragmatic nature. Insofar as the latter examples are acceptable, the objects receive an intrinsically distributive interpretation (with attentiveness being distributed equally across the object), and it is apparently difficult for bare *heel* phrases to receive such a distributive interpretation. This seems to lend further confirmation to the importance of the UNIT part of the semantic characterization of pre-determiner bare *heel*; while the house in (166) is conceived of as a unit whose parts are *collectively* affected by the event expressed by the verb phrase, the verbal events in (167) affect the subparts of the movie not as a group or a unit but only in a *distributive* fashion.

The STRUCTURED UNIT requirement is also reflected by the fact illustrated in (168a) that plural noun phrases normally cannot be combined with pre-determiner bare *heel*; in the general case, plurals do not constitute a unit but a *set* of units.

Systematic exceptions to the ban on pre-determiner *heel* construed with plural noun phrases are pluralia tantum, like *de tropen* in (168b), and formal plurals that denote a conventionally fixed unit, like *de Antillen* in (168c).

- (168) a. \*heel de/die/deze/Ø steden  
           all the/those/these/Ø towns  
       b. El Niño heeft het klimaat in heel de tropen aangetast.  
           El Niño has the climate in all the tropics affected  
       c. Hij is de bekendste politicus van heel de Antillen.  
           he is the best-known politician of all the Antilles

Though the plurals in (168b&c) behave like regular plurals in their external syntactic distribution in, e.g., triggering plural agreement on the finite verb, their denotation is that of a UNIT. The fact that pre-determiner bare *heel* can quantify pluralia tantum and plurals that denote a single unit confirms the STRUCTURED UNIT ingredient of its semantics.

### B. Partitioning

The partitioning part of the semantics of *heel* can be illustrated with reference to example (169), which seems to imply that *all of the* rooms (and other relevant subparts) of the house have been cleaned, that is, all of the constituent parts that together make up the house have been affected.

- (169) Heel het huis is schoongemaakt.  
       all the house is clean.made

Since *heel* partitions the entity denoted by the noun phrase it quantifies into its constituent parts, we expect an anomalous output to arise when these parts cannot be individually affected by the event denoted by the verb phrase. This seems to be confirmed by (170): (170a) is unacceptable because it is only the motorboat as a unit that can be rocking, that is, the parts of the motorboat cannot be individually affected; (170b) is awkward since mud typically covers the house as a unit, not all of its constituent parts (i.e., the individual rooms) separately. Some caution is needed here, however, since not all speakers agree that (170b) is indeed anomalous.

- (170) a. \*<sup>?</sup>Heel de motorboot gaat heen en weer.  
           all the motorboat goes to and fro (≈ is rocking)  
       b. <sup>%</sup>Heel het huis is bedolven onder de modder.  
           all the house is buried under the mud

### C. Exhaustivity

Exhaustivity, the third ingredient of the meaning of pre-determiner bare *heel*, is illustrated in (171). In (171a), *heel* prompts a reading in which all of the individual office spaces comprising the office block have been rented out. Although judgments are somewhat delicate, it seems that addition of an “except”-clause, which overrules the interpretation “in all of its constituent parts” assigned by *heel*, leads to a somewhat awkward result. Example (171b&c) illustrates the same point; again, addition of the “except”-clause gives a marked result.

- (171) a. Heel het kantoorgebouw (<sup>3</sup>behalve de begane grond) is verhuurd.  
all the office block except the ground floor is rented.out  
b. Heel de Veiligheidsraad (<sup>3</sup>behalve China) stemde voor de resolutie.  
all the Security Council except China voted in favor of the resolution  
c. Ik heb heel de serie (<sup>??</sup>behalve deel 28).  
I have all the series except volume 28

The exhaustivity part of the meaning of pre-determiner bare *heel* is eminently present in the Dutch rendering of the introduction to *Asterix the Gaul* by Goscinny and Uderzo, given in (172). The part that is interesting for our current discussion is given in italics: the claim that the whole of Gallia (*heel Gallië*) is occupied is refuted by pointing at a small settlement, which continues to offer resistance.

- (172) Dutch rendering: “Zo’n 2000 jaar geleden was heel Gallië [...] bezet door soldaten van Caesar, de Romeinse veldheer. *Héél Gallië? Nee, een kleine nederzetting bleef moedig weerstand bieden aan de overweldigers en ...*”  
Gloss: About 2000 year ago, the whole of Gaul was occupied by the soldiers of Caesar, the Roman commander. *The whole of Gaul? No, a small settlement continued to offer resistance to the usurpers and ...*  
English rendering: ‘The year is 50 B.C. Gaul is entirely occupied by the Romans. Well, not entirely ... One small village of indomitable Gauls still holds out against the invaders. And ...’

In agreement with the characterization of the semantics of pre-determiner bare *heel* in terms of exhaustive partitioning of structured units, we find that bare *heel* normally does not alternate with *half* ‘half’. This is especially the case when the noun phrase hosting *heel/half* is “totally affected” by the event denoted by the verb phrase, as in (173): *bezaaid liggen met* means “to be totally covered with” and *leegroven* means “to rob empty”, that is, to rob in such a way that the entire object is emptied as a result. Such “totally affecting” verbal predicates only allow partitioning of their surface subject when the partitioning is exhaustive: substituting *half* for *heel* yields an anomalous result since *half* differs from *heel* precisely in *not* being exhaustive.

- (173) a. Heel/\*Half het eiland lag bezaaid met bloemen.  
all/half the island lay BE-seeded with flowers  
‘The island was completely/for a large part covered with flowers.’  
b. Heel/\*Half het dorp werd leeggeroofd.  
all/half the village was robbed.empty

The verb phrases in (174), on the other hand, are not “totally affecting” in the sense that they apply to the inhabitants of the island/village only, and now the modifier *heel* does alternate with *half*. The reason for this is that these verbal predicates allow but do not demand exhaustive partitioning of the surface subject.

- (174) a. Heel/<sup>%</sup>Half het eiland leeft van het toerisme.  
all/half the island lives of the tourism  
b. Heel/<sup>%</sup>Half het dorp liep uit om hem te zien.  
all/half the village ran out COMP him to see

Note that the percentage sign in (174) indicates that some speakers find *half* categorically impossible in pre-determiner position; examples like (174) can be readily found on the internet, however. It must further be noted that we have seen several other cases with *half* on the internet that seem to be of some different nature than the examples in (174), so that further investigation of the alternation between *heel* and *half* would certainly be welcome.

## II. Negative polarity

Alongside its core use as a quantifier, discussed in Subsection I, pre-determiner bare *heel* can also be used in a rather different fashion. We will show below that the semantic contribution of *heel* in examples of the type in (175) seems best described in terms of a combination of °negative polarity and condescension. The examples in (175) are fully acceptable but are given a question mark within parentheses, since they are somewhat marked compared to similar constructions featuring post-determiner inflectible *heel*, which will be discussed in Section 7.2.1.2.2, sub III.

- (175) a. <sup>(?)</sup>*Ik ken heel die vent niet.*  
           I know all that guy not  
           ‘I don’t know that guy at all.’  
       b. <sup>(?)</sup>*Ik was heel die toestand alweer vergeten.*  
           I was all that situation again forgotten  
           ‘I had forgotten about this whole affair.’

The sentences in (175) are negative, with negation being expressed syntactically by the negative adverb *niet* in (175a), and lexically by the verb *vergeten* ‘to forget/to not know anymore’ in (175b). The examples in (176) show that counterparts of (175) in which negation is absent are unacceptable. This suggests that *heel* is a negative polarity item.

- (176) a. \**Ik ken heel die vent.*  
           I know all that guy  
       b. \**Ik heb heel die toestand altijd onthouden.*  
           I have all that situation always remembered

It must be noted, however, that if *heel* is indeed a negative polarity item in these examples, its licensing must be less strict than for other negative polarity items. In particular, ordinary negative polarity items like *ook maar iemand* ‘anyone’ do not occur in the position occupied by *heel die toestand* in (175b) as the negative component of the verb *vergeten* will not suffice to license them; see Den Dikken (2002) for discussion.

Examples like (175) are typically used as statements revealing the speaker’s lack of appreciation or interest in the entity referred to by the *heel* phrase. Consistent with this is that the distal demonstrative in (175), which can be used to express a negative evaluation on the part of the speaker (cf. 5.2.3.2.2, sub IV), cannot readily be replaced by other determiners, as is shown by the awkwardness of (177).



- (177) a. Ik ken heel \*de/?deze vent niet.  
I know all the/this guy not  
b. Ik was heel \*de/?deze toestand allang weer vergeten.  
I was all the/this situation already.long again forgotten

Our judgments on the examples in (175) and (177) seem confirmed by a Google search performed in December 2008 on the strings [*heel DET vent*] and [*heel DET vent*], with *DET* ranging over *die*, *de* and *deze*. For *die*, we found 38 relevant examples, for *de* only two, and for *deze* only three.

### 7.2.1.2. Post-determiner inflectible *heel*

The semantics of post-determiner inflectible *heel* is not homogeneous; a distinction must be made between purely adjectival and quantificational uses of *heel*. In Section 7.2.1.2.1, we will start with a brief discussion of the former, which expresses the meaning “whole/intact”. This is followed in 7.2.1.2.2 by a more extensive discussion of the quantificational uses.

#### 7.2.1.2.1. Adjectival *heel*

We can be brief about purely adjectival *heel*. The semantics of adjectival *heel* is rather varied. Depending on the entity it modifies, it can be translated by English adjectives like *whole*, *intact*, *complete*, *not broken*, or *full*. Some examples are given in (178).

- (178) a. een hele taart/appel  
a whole cake/apple  
‘a cake/apple that has not been (partially) eaten or cut into slices’  
b. een hele baan  
a whole job  
‘a full-time job’  
c. een hele radio  
a whole radio  
‘a radio that is not broken’

Since adjectival *heel* attributes a property to the noun it modifies, it can best be considered a set-denoting adjective. If this is indeed the case, we would expect that it could be used in a predicative function as well. As can be seen in (179), however, this prediction is only partially borne out. Of the three examples, only (179c) seems to be fully acceptable.

- (179) a. ?De taart/appel is heel.  
the cake/apple is whole  
b. \*De baan is heel.  
the job is whole  
c. De radio is (weer) heel.  
the radio is again intact  
‘The radio is intact (again).’

Purely adjectival *heel* makes no quantificational contribution. There are three ways in which this can be demonstrated.

*I. Adjectival heel can be combined with pre-determiner bare heel*

The first indication that adjectival *heel* is non-quantificational in nature comes from the fact that it combines with quantificational pre-determiner *heel*, as illustrated in the examples in (180).

- (180) a. Heel deze hele taart is beschimmeld (maar die is nog goed).  
 all this whole cake is moldy but that.one is still fine  
 'This complete cake is moldy in its entirety, but that one is still fine.'  
 b. Heel mijn hele baan wordt wegbezuinigd.  
 all my whole job is economized.away  
 'My full-time job is being cut in its entirety.'

*II. Adjectival heel can be combined with niet helemaal*

Another indication comes from example (181). The first conjunct *Hij at de hele taart* is ambiguous between a quantificational and an adjectival interpretation for *heel*, that is, between "He ate the entire cake" and "He ate (of) the cake that was complete/had no slice missing". The second conjunct disambiguates the example, since it contradicts the first conjunct under the quantificational reading: He ate the entire cake but not entirely.

- (181) Hij at de hele taart, maar niet helemaal.  
 he ate the whole cake but not entirely  
 'He ate [of] the cake that was complete, but he did not finish it.'

*III. Adjectival heel alternates with the adjective half 'half'*

Adjectival *heel* alternates with *half* 'half', which can also receive a purely adjectival interpretation and which, like adjectival *heel* in (180), can be combined with pre-determiner bare *heel* into a single noun phrase.

- (182) a. Heel deze halve taart is beschimmeld.  
 all this half cake is moldy  
 'This complete half cake is moldy in its entirety.'  
 b. Heel mijn halve baan wordt wegbezuinigd.  
 all my half job is economized.away  
 'My half-time job is being cut in its entirety.'

For completeness' sake, note that predicative use of *half* results in a severely degraded result, just like the predicative use of *heel* in (179a&b).

- (183) a. \*De cake is half.  
 the cake is half  
 b. \*Mijn baan is half.  
 the cake is half

Example (184) shows that adjectival *heel/half* can be immediately preceded by post-determiner quantificational *heel/half*: although they need highly specialized contexts to be usable, these examples seem perfectly grammatical. This option unambiguously shows that a distinction should be made between adjectival and quantificational instantiations of inflectible *heel* (and *half*). Note that quantifica-

tional *heel/half* is always the first in sequence, the second being the purely adjectival form, which is, of course, in full conformity with the fact that post-determiner quantifiers precede attributive adjectives in Dutch.

- (184) a. Hij at de hele/halve hele taart.  
           he ate the whole/half whole cake  
           ‘He ate all/half of the cake that was complete.’  
       b. Hij at de hele/halve halve taart.  
           he ate the whole/half half cake  
           ‘He ate all/half of the cake that was half.’

#### 7.2.1.2.2. *Post-determiner quantificational heel*

With adjectival *heel* properly set apart from the other occurrences of *heel*, in what follows we will concentrate on the quantificational readings of post-determiner *heel*. Post-determiner quantificational *heel* can be divided into three subtypes, which respectively express TOTALITY, DEGREE and POLARITY.

##### 1. *Totality*

By far the most common quantificational contribution made by post-determiner inflectible *heel* is that of “totality”. An example like *de stad* differs semantically from *de hele stad* ‘the whole city’ in the same way that their English translations “the city” and “the whole/entire city” differ: *de hele stad* denotes the totality of the town, the town in its entirety. That *heel* in its totality sense is quantificational is evident from the fact that it does not combine with *helemaal*, as seen in (185).

- (185) a. De hele zon is van gas.  
           the whole sun is of gas  
       b. De zon is helemaal van gas.  
           the sun is entirely of gas  
       c. \*De hele zon is helemaal van gas.  
           the whole sun is entirely of gas

The totality sense of inflectible *heel* comes close to that of pre-determiner bare *heel* discussed in Section 7.2.1.1, which is clear from the fact that it is impossible to combine the two varieties of *heel* within a single noun phrase.

- (186) a. heel mijn bezit  
           all my estate  
       b. mijn hele bezit  
           my whole estate  
       c. \*heel mijn hele bezit  
           all my whole estate

But despite the close semantic relationship between pre-determiner bare *heel* and post-determiner *heel*, there is an important difference between the two. Whereas pre-determiner bare *heel* forces an exhaustive partitioning of the whole into all of its relevant subparts, no such partitioning is necessarily implied by post-determiner *heel* (though a partitioning reading seems compatible with post-determiner *heel* in

many cases). As a consequence, some of the semantic anomalies that we found with bare *heel* dissolve when pre-determiner bare *heel* is replaced by post-determiner inflectible *heel*. We illustrate this in the examples below, referring the reader back to the more detailed discussion in Section 7.2.1.

Consider the examples in (187). What (187a) means is that the entire house has been cleaned *from top to bottom*, not necessarily that all the individual rooms of the house have been cleaned. As a reflex of this, the cleaning in (187a) need not be directed towards the interior of the house but can also involve the exterior of the house, which would be distinctly odd in the case of *Heel het huis is schoongemaakt* ‘All the house has been cleaned’ in (169). Similarly, the noun phrases in (187b&c) simply refer to the entire motorboat/house, and, as a result, these examples are perfectly acceptable in contrast to those in (170), where reference is made to all the relevant subparts of the motorboat/house.

- (187) a. Het hele huis is schoongemaakt.  
the whole house is clean.made  
b. De hele motorboot gaat heen en weer.  
the whole motorboat goes to and fro ( $\approx$  is rocking)  
c. Het hele huis is bedolven onder de modder.  
the whole house is buried under the mud

The examples in (167) in Section 7.2.1 have shown that pre-determiner *heel*, as a consequence of the *unit* feature of its semantics, bars the noun phrases which it quantifies from occurring in distributive contexts. Post-determiner *heel* does not turn out to be sensitive to this distributivity effect: the examples in (188) are perfectly acceptable due to the fact that *heel* simply expresses that the predicate affects the referent of the noun phrase in its entirety.

- (188) a. Ik heb de hele film mijn volle aandacht gegeven.  
I have the whole movie my full attention given  
‘I gave the entire movie my full attention.’  
b. Ik heb aandachtig naar de hele film zitten kijken.  
I have attentively to the whole movie sit look  
‘I watched the entire movie attentively.’

The examples in (171) have shown that modifiers expressing an exception give rise to a marked result in noun phrases featuring pre-determiner bare *heel*. Again, we find that post-determiner *heel* behaves differently: the sentences in (189a&b) are perfectly acceptable with the “except”-clause present. This will be clear from the fact that a Google search on the strings [*heel de serie behalve*] and [*de hele serie behalve*] performed in July 2008 resulted in, respectively, 1 and 18 hits.

- (189) a. Het hele kantoorgebouw (behalve de begane grond) is verhuurd.  
the whole office block except the ground floor is rented.out  
b. De hele Veiligheidsraad (behalve China) stemde voor de resolutie.  
the whole Security Council except China voted for the resolution  
c. Ik heb de hele serie (behalve deel 28).  
I have the whole series except volume 28

Since post-determiner *heel* and *half* do not force a partitioning of the object denoted by the noun they combine with, the friction between “totally affecting” predicates and the pre-determiner *half* in (173) is lacking in the case of post-determiner *half* in (190). The examples in (190) simply contend that the predicate expressed by the verb phrase holds for, respectively, a hundred or fifty per cent of the island/village.

- (190) a. Het hele/halve eiland lag bezaaid met bloemen.  
           the whole/half island lay BE-seeded with flowers  
       b. Het hele/halve dorp werd leeggeroofd.  
           the whole/half village was robbed.empty

## II. Degree

The quantificational interpretations in which *heel* means “total” and *half* means “fifty per cent of” compete with an alternative reading of these sentences in which *heel* and *half* express degree. This reading is discussed in this subsection.

### A. Metaphor (high/moderate degree)

The modifiers *heel* and *half* in the examples of the type in (191) typically contribute the semantics of “(moderately) high degree”; the examples receive an interpretation according to which the verbal proposition is predicated to a substantial degree of the noun phrase containing *heel/half*. Metaphorical examples of the type in (191) are particularly common in the context of (more or less fixed expressions of) exaggeration. Although the degree modifiers *heel* and *half* are equally possible in (191), the two differ in that the degree to which the verbal proposition holds is understood to be stronger when *heel* is used than when *half* is used. This difference is not very robust, though.

- (191) a. Komt er ineens een hele/halve volksverhuizing op me af!  
           comes there suddenly a whole/half mass migration at me prt.  
           ‘All of a sudden a load of people comes running towards me!’  
       b. Hij kreeg een hele/halve zondvloed op z’n dak.  
           he got a whole/half deluge on his roof  
           ‘He got drenched.’

The degree reading is also obtainable in the examples in (190), repeated here as (192). In these examples, however, this is easiest with the modifier *halve*, which on its degree reading expresses that there were quite a lot of flowers spread out across the island, and that quite a few objects in the village were stolen in the robbery. Degree readings of this type with *heel* are only readily available in metaphorical cases like the ones in (191); in examples like (192) they seem harder to get.

- (192) a. Het hele/halve eiland lag bezaaid met bloemen.  
           the whole/half island lay BE-seeded with flowers  
       b. Het hele/halve dorp werd leeggeroofd.  
           the whole/half village was robbed.empty

Noun phrases containing the degree modifiers *heel/half* require that main accent be on the noun: *een hele/halve VOLKSverhuizing* in (191a) and *het halve DORP* in (192b). Noun phrases containing the quantifiers *heel/half* meaning “100/50%”, on

the other hand, require that main accent be placed on the quantifier: (190b) will be realized as *het HALve dorp*.

*B. The “quite” degree reading*

In sentences of the type in (193), the semantics of inflectible *heel* is also one of degree modification, which is best rendered by means of English *quite*. In contrast to the metaphorical high degree cases in (191), inflectible *heel* in (193) does not alternate with *half*, but with adjectival °intensifiers like *behoorlijk*, *flink* ‘quite’, generally with little or no difference in meaning.

- (193) a. Dat is een heel/behoorlijk gedoe.  
that is a whole/quite hassle  
‘That is quite a hassle.’  
b. Dat is een hele/behoorlijke toer/toestand.  
that is a whole/quite tour de force/situation  
‘That is quite a tour de force.’  
c. Ze maakten een hele/flinke scène.  
they made a whole/quite scene  
‘They made quite a scene.’  
d. Dat was een hele/flinke opluchting.  
that was a whole/quite relief  
‘That was quite a relief.’

The “quite” degree reading is impossible to obtain in definite noun phrases; examples like (194a) are only acceptable on the totality interpretation of *heel*. But indefinite noun phrases with determiners other than the article *een* do not allow the “quite” degree reading either, as shown by the unacceptability of (194b&c). We therefore conclude that the “quite” degree reading of inflectible *heel* is contingent on the presence of the indefinite article *een*.

- (194) a. <sup>#</sup>Ik ben het/dat/dit (hele) gedoe moe.  
I am the/that/this whole hassle weary  
‘I am weary of the/that/this whole hassle.’  
b. Dat is zo’n (\*heel) gedoe.  
that is so a whole hassle  
c. Dat is van dat (\*hele) gedoe.  
that is such whole hassle

Finally, note that inflectible *heel* may also modify the pronoun *wat* in (195a). Example (195b) shows that in this case *heel* also alternates with adjectival intensifiers like *behoorlijk* and *flink* ‘quite’. However, as is indicated by the English translations, one of the possible interpretations of *heel wat* is lacking in the constructions with adjectival intensifiers.

- (195) a. Dat is heel wat.  
that is quite what  
‘That is quite something/a lot.’  
b. Dat is behoorlijk/flink wat.  
that is quite what  
‘That is quite a lot.’

*C. Binominal constructions: alternation between high and “quite” degree*

The interpretation of *heel* in binominal noun phrases of the type in (196) is varied, in a rather subtle way. Three interpretations are available for examples of this type. The high and “quite” degree interpretations of *heel* arise when the noun *verzameling/lading* is quantificational, whereas the adjectival meaning “complete” requires that the noun *verzameling/lading* is referential, that is, assigned its literal meaning “collection/load”; see Section 7.2.1.2.1 for discussion.

- (196) a. Ik heb een hele verzameling boeken gekocht.  
           I have a whole collection books bought  
       b. Ik heb een hele lading boeken gekocht.  
           I have a whole load books bought

Example (197) aims at bringing out the prosodic differences between the three interpretations of *heel*. The representations show that the two types of degree reading with the quantificational construal of *verzameling* require a single stress peak on the noun *verzameling*. The high degree reading “a very large amount/number” in (197a) furthermore requires lengthening of the vowel, and the “quite” degree reading “quite a few” in (197b) requires an additional stress peak on the degree modifier *heel*. On the referential reading of *verzameling*, which can be easily be distinguished from the other uses by adding, e.g., a possessive pronoun, the adjective *heel* receives main stress.

- (197) a. een hele verZA—meling boeken [high degree]  
       b. een HEle verZAMeling boeken [“quite” degree]  
       c. een/zijn HEle verzameling boeken [purely adjectival: “complete”]

Note that the properties of the high degree reading of inflectible *heel* in (197a) are also salient in metaphorical “high degree” examples like those in (191): *Hele generA—ties hebben dit lied meegezongen* ‘Whole generations have sung along with this song’. Note further that the prosodic properties of the constructions in (197b&c) are preserved when we replace *heel* by, respectively, a degree modifier like *behoorlijk* or an adjective like *volledig* ‘complete’, but there is nothing that can replace *heel* on its high degree reading with preservation of the intonation contour in (197a).

Examples of the type in (196) can be pluralized, but this seems to result in the loss of two of the readings: it is only the high degree interpretation that seems to survive in (198), which is also clear from the fact that the typical intonational pattern for sentences of this type involves main accent on the noun: the stressed vowels of *verzamelingen* and *ladingen* receives a prolonged duration. That the adjectival interpretation for *hele* in (198) is hard to get is also clear from the fact that addition of, e.g., a possessive pronoun to *hele verzamelingen* is pragmatically odd: *#Ik heb mijn hele verzamelingen verkocht* ‘I sold my whole collections’.

- (198) a. Ik heb hele verZA—melingen boeken verkocht.  
           I have whole collections [of] books sold  
       b. Ik heb hele LA—dingen boeken verkocht.  
           I have whole loads [of] books sold

The core lexical semantics of *heel*, viz. totality, may not be entirely absent in these “high degree” examples, as is suggested by the fact that *heel* can be rendered in English with “whole” or “entire”. For the “quite” degree reading of *heel*, on the other hand, no translation with English *whole* or *entire* is possible in the general case; cf. example (193). This interpretation of *heel* hence seems far removed from the core quantificational semantics of this element.

#### D. Adverbial *heel* and degree readings

As is illustrated in (199), a degree interpretation is also possible in the case of adverbial *heel*, that is, in cases where *heel* modifies an attributive or a predicative adjective; cf. Section A3.1.2. Whether *heel* receives a high or a “quite” degree reading seems to depend on the nature of the adjective with which it is construed. Note that *heel* cannot be replaced with *half* in (199); degree modification of adjectives by *half* is possible only if *half* and the adjective form a compound (cf. *halfzachte*/\**halve zachte drop* ‘half-soft licorice’) and this is not possible with the adjectives in (199).

- (199) a. Dat is een heel/hele goede prestatie. [high degree]  
           that is a very smart accomplishment  
       b. Dat is een heel/hele redelijke prestatie. [“quite” degree]  
           that is a quite reasonable accomplishment

We want to stress that the degree readings of *heel* are not contingent on its construal as an adverb. That *heel* is not an adverb in the examples discussed up to (198) is evident from the fact illustrated in (200) that it *must* inflect in accordance with the gender and number features of the head noun, whereas schwa-inflection is always optional with the adverbial phrases in (199).

- (200) Dat is een hele/\*heel prestatie.  
           that is a whole accomplishment  
           ‘That is quite an accomplishment.’

#### E. Degree modification of predicative noun phrases

At the end of this discussion of the degree readings of *heel*, we address some additional types of examples classifiable under the “degree” header that involve predicatively used noun phrases. We start with “quite” degree readings in clauses containing *al* ‘already’ and *nog (best)* ‘actually’. Consider the examples in (201), which differ from the examples discussed so far in that the adverb *al* ‘already’ must be present.

- (201) a. Jij bent <sup>??</sup>(al) een hele vent/heer/bink!  
           you are already a whole guy/gentleman/tough.guy  
           ‘You’re quite a guy/gentleman/tough guy already!’  
       b. Jij bent <sup>??</sup>(al) een hele meid/dame!  
           you are already a whole girl/lady  
           ‘You’re quite a girl/lady already!’  
       c. Jij bent <sup>??</sup>(al) een hele computerexpert!  
           you are already a whole computer.expert  
           ‘You are quite a computer expert already!’



Examples like (201a&b) are typically addressed to little boys or girls who are assumed to take pride in looking older and wiser; the “quite” degree resides in the extent to which adulthood has already been “reached” or mimicked by the child in question. Especially in mildly ironic contexts, this type can also be used with nouns other than the ones illustrated in (201a&b), as shown by a sentence like (201c).

Since sentences of the type in (201) are typically used as statements directed towards an addressee (little children in particular), they usually have second person pronouns as their subjects. They are most common as exclamations (as will be clear from the punctuation used), but constructions of a similar type are also found in (tagged) rhetorical questions. An example is given in (202); notice that in this context the adverb *al*, which is required in (201), is typically absent.

- (202) Jij vindt jezelf zeker (#al) een hele vent, hè?  
 you find yourself sure already a whole guy right  
 ‘You think you’re quite a guy, don’t you?’

In (203) we find a dependency between *heel* qua degree item and the adverbial *nog* ‘still/yet’ similar to the kind found in (201) between the *heel* degree phrases and the adverb *al* ‘already’. *Nog* is often preceded or followed by the form *best*, which is difficult to render in English; the closest English paraphrase is probably something like “actually”. The two word orders seem semantically equivalent.

- (203) a. Dat is <best> nog <best> een heel karwei.  
 that is BEST still a whole job  
 ‘That’s (actually) quite a job.’  
 b. Dat was <best> nog <best> een hele wandeling.  
 that was BEST still a whole walk  
 ‘That was (actually) quite a walk.’  
 c. Dat was <best> nog <best> een heel gedoe.  
 that was BEST still a whole hassle  
 ‘That was (actually) quite a hassle.’

One may wonder what the structural position is of the adverbial elements found in (201) and (203). To investigate this question, we will consider the topicalization constructions in (204). It must be noted, however, that judgments for these examples are difficult and will probably vary among speakers. As the primeless examples in (204) show, it seems difficult to leave the adverbs *al* and *nog best/best nog* behind under topicalization of the *heel* phrases, which may indicate that they are subparts of the *heel* noun phrases.

- (204) a. <sup>??</sup>Een hele vent ben jij al!  
 a whole guy are you already  
 b. \*Een heel karwei is dat nog best!  
 a whole job is that still best  
 c. <sup>??</sup>Een heel karwei is dat best nog!  
 a whole job is that best still

The observed degradation induced by stranding of these adverbs might be taken to shed light on the dependency relation observed between *heel* and these adverbs in

the examples under discussion. However, it should be pointed out that topicalization of the *heel* phrases together with the adverbs *al* and (part of) *nog best/best nog* does not yield a very felicitous result either.

- (205) a. ??Al een hele vent ben jij!  
       b. ??Best een heel karwei is dat nog!  
       b. ??Nog best een heel karwei is dat!  
       c. \*?Nog een heel karwei is dat best!  
       c'. ??Best nog een heel karwei is dat!

An alternative approach would be to assume that *al* and *nog best/best nog* are independent constituents, which would account for the degraded status of the pied piping cases in (205), and to say that the dependency of *heel* on the adverbs *al* and *nog best/best nog* is similar to that between negative polarity items and their licensors; the deviance of stranding *al* and *nog best/best nog* in (204) might then follow from the fact that the topicalized *heel* phrase is outside the licensing domain of the adverb. We leave it to future research to decide whether this suggestion holds water.

The set of examples in (206) are syntactically similar to those in (201), and partially overlaps in the lexical nouns heading the *heel* phrases (*vent*, *heer*, *dame*), but they differ in that in (206) no adverb like *al* is found. Furthermore, the degree reading introduced by *heel* is that of high degree, which is directed towards the implicit qualities of the head noun; *een hele vent/kerel* predicates a high degree of excellence of the subject. Note that, although *vent* and *kerel* often carry negative evaluative connotations, in the context in (206a) they are used to give expression to a highly positive quality.

- (206) a. Hij is een hele vent/kerel/heer.  
           he is a whole guy/fellow/gentleman  
           ‘He is an excellent man/a man of status, social significance.’  
       b. Zij is een hele dame.  
           she is a whole lady  
           ‘She is a real lady.’

Finally note that the connotation of excellence, implicit in the nouns used in the examples in (206), is apparently lacking in others: examples like ??*Hij is een hele jongen/man/vrouw* ‘a whole boy/man/woman’ do not yield the qualitative high degree interpretation of the examples in (206).

### III. Negative polarity

The °negative polarity reading of inflectible *heel* is comparable to that of English *at all*, with the added semantic aspect of condescension; cf. Section 7.2.1.1, sub II. This function of *heel* is fairly widespread, and some illustrations of it are given in (207). The head noun of the construction can be either a common noun or a proper noun, as in, respectively, (207a-c) and (207d).

- (207) a. Ik had het hele mens niet gezien.  
 I had the whole person not seen  
 'I didn't even see the person/woman at all.'
- b. Ik zou die hele jongen nog niet eens een hand willen geven.  
 I would that whole boy yet not even a hand want give  
 'I wouldn't even want to shake hands with that boy.'
- c. Ik had in geen jaren meer over dat hele idee nagedacht.  
 I had in no years anymore about that whole idea thought  
 'I hadn't thought about that idea in years.'
- d. Ik was die hele Bert Mulder allang weer vergeten.  
 I was that whole Bert Mulder already.long again forgotten  
 'I had long forgotten about this Bert Mulder.'

#### A. D-linking

Negative polar *heel* phrases in (207) are typically °D-linked, that is, they cannot be uttered out of the blue, but must refer to some active discourse topic. Example (207a), for instance, would be typically used in a context like (208).

- (208) Mijn buurvrouw was erg beledigd omdat ik haar niet gegroet had,  
 my neighbor was very offended because I her not greeted had  
 maar ik had het hele mens niet gezien.  
 but I had the whole person not seen  
 'My neighbor was very offended because I didn't greet her, but I hadn't seen the woman at all.'

That D-linking is required is also suggested by the fact illustrated by (216) that, unlike definite noun phrases, negative polar *heel* phrases obligatorily scramble across adverbial phrases like *nog nooit*; see Section 8.1.3 for a discussion of the restrictions on scrambling.

- (209) a. Ik heb <mijn buurvrouw> nog nooit <mijn buurvrouw> gezien.  
 I have my neighbor yet never seen  
 'I have never seen my neighbor so far.'
- b. Ik had <het hele mens> nog nooit <\*het hele mens> gezien.  
 I had the whole person yet not seen  
 'I didn't ever see the person/woman at all so far.'

#### B. The licensing of negative polar *heel*

The fact that (207d) is grammatical raises a question concerning the licensing of negative polar *heel*. When we restrict ourselves to negative contexts, run-of-the-mill negative polarity items like *ook maar iemand* 'anyone' are normally licensed by means of a syntactically expressed negation: this negation can be expressed on some other °c-commanding argument in the sentence, as illustrated in (210a&a'), or by the negative adverb *niet* provided that it is part of some higher clause, as is illustrated by the contrast between (210b) and (210b').

- (210) a. Niemand heeft ook maar iemand gezien.  
 nobody is OOK MAAR someone seen  
 'Nobody has seen anybody.'
- a'. Niemand denkt dat Peter ook maar iemand gezien heeft.  
 nobody thinks that Peter OOK MAAR someone seen has  
 'Nobody thinks that Peter has seen anybody.'
- b. \*Peter heeft <niet> ook maar iemand <niet> gezien.  
 Peter has not OOK MAAR someone seen
- b'. Ik denk niet dat Peter ook maar iemand gezien heeft.  
 I think not that Peter OOK MAAR someone seen has  
 'I do not think that Peter has seen anybody.'

When we compare the primeless examples of (210) to those in (211), we see that the pattern with negative polar *heel* is in fact the reverse: polar *heel* can be licensed by the negative adverb *niet*, but not by a c-commanding argument. Negative polar *heel* also behaves differently when it comes to licensing by negation in some higher clause: the counterparts of the primed examples in (210) with negative polar *heel* are unacceptable.

- (211) a. \*<sup>?</sup>Niemand heeft het hele mens gezien.  
 nobody has the whole person seen
- a'. \*Niemand denkt dat Peter het hele mens gezien heeft.  
 nobody thinks that Peter the whole person seen has
- b. Peter heeft het hele mens niet gezien.  
 Peter has the whole person not seen
- b'. \*Ik denk niet dat Peter het hele mens gezien heeft.  
 I think not that Peter the whole person seen has

In the primed examples in (210) and (211) the polarity items function as objects, but we find the same contrast when the polarity items function as a subject. This is shown in (212) by means of examples in which negation is expressed by the negative adverb *niet*, but similar judgments are obtained when we use examples with the negative phrase *niemand* 'nobody' as the subject of the matrix clause.

- (212) a. Ik denk niet dat ook maar iemand Peter gezien heeft.  
 I think not that OOK MAAR someone Peter seen has  
 'I do not think that anybody has seen Peter.'
- b. \*Ik denk niet dat het hele mens Peter gezien heeft.  
 I think not that the whole person Peter seen has  
 'I do not think that the person/woman has seen Peter.'

Note, however, that it has been claimed that examples like (212b) improve when the embedded clause contains another polarity item, as shown in (213); in other words, the negative polar phrase *het hele mens* is licensed by the negative polarity items *ooit* 'ever' and *ook maar iemand* 'anybody' in, respectively, (213a) and (213b), which are licensed in turn by the negation in the matrix clause. Note that the use of the percentage mark indicates that some speakers do not readily accept examples of this sort (which may simply be due to the complexity of the examples).

- (213) a. <sup>%</sup>Ik denk niet dat het hele mens Peter ooit gezien heeft.  
 I think not that the whole person Peter ever seen has  
 'I do not think that the person/woman has ever seen Peter.'
- b. <sup>%</sup>Ik denk niet dat het hele mens ook maar iemand gezien heeft.  
 I think not that the whole person OOK MAAR someone seen has  
 'I do not think that the person/woman has seen anybody.'

The contrast between example (213b) above and (214a) below shows that the phrase *het hele mens* must c-command the negative polarity item that licenses it. Example (214b) shows something similar for a negative polar *heel* phrase that functions as a direct object. In the latter case, this c-command restriction may of course follow from the D-linking requirement, which forces scrambling, but this requirement has nothing to say about the contrast between (213b) and (214a); cf. Section 7.2.1.2.2, sub III. We refer the reader to Den Dikken (2002) and Hoeksema (2007) for a more detailed discussion and alternative approaches to this c-command restriction.

- (214) a. \*Ik denk niet dat ook maar iemand het hele mens gezien heeft.  
 I think not that OOK MAAR someone the whole person seen has  
 'I do not think that anybody has seen the person/woman.'
- b. Ik denk niet dat ik <<sup>%</sup>het hele mens> ooit <\*het hele mens> gezien heb.  
 I think not that I the whole person ever seen has

A final difference between the licensing restrictions on ordinary negative polarity items and negative polar *heel* is that the latter can be licensed by implicitly negative verbs like *vergeten* 'to forget/to not know anymore', whereas the former cannot (although there are more negative polarity items that resemble *heel* in this respect; cf. Klooster 1993).

- (215) a. \*Ik was ook maar iemand vergeten.  
 I was OOK MAAR someone forgotten
- b. Ik was die hele Bert Mulder allang weer vergeten.  
 I was that whole Bert Mulder already.long again forgotten  
 'I had long forgotten about this Bert Mulder.'

Note that the relevance of implicit negation for licensing can also be seen by comparing the examples in (216): while the verb *passeren* 'to pass' plausibly features implicit negation in its lexical semantics ('to not be behind anymore'), this is certainly not the case with the verbs in (216b).

- (216) a. Ik was die hele Bert Mulder allang gepasseerd/voorbijgereden.  
 I was that whole Bert Mulder already.long passed/driven.past  
 'I had long passed this Bert Mulder.'
- b. \*Ik had die hele Bert Mulder allang gezien/ontmoet/begroet.  
 I had that whole Bert Mulder already.long seen/met/greeted

Now that we have discussed the differences between run-of-the-mill negative polarity items like *ook maar iemand* 'anybody' and negative polar *heel* phrases, we can discuss the syntactic functions the latter can perform. In (207a&b), negative polar

*heel* phrases are used, respectively, as a direct and an indirect object, and in (207c) one is used as the complement of a preposition. Under certain conditions, negative polar *heel* phrases may also occur as a subject. We illustrate this in (217) by means of a proper noun, which cannot be combined with *heel* on any of its other uses.

- (217) <sup>(?)</sup>Die hele Bert Mulder was door iedereen allang weer vergeten.  
that whole Bert Mulder was by everyone already long again forgotten

Example (217) is the passive counterpart of (207d/210), so we may conclude that a °DO-subject behaves more or less on a par with the direct object (the passive construction is perhaps slightly marked, but certainly acceptable). This leads us to expect that the subjects of °unaccusative verbs can also appear as a negative polar *heel* phrase. This expectation is indeed borne out, as is shown in (218) for the unaccusative verb *vertrekken* ‘to leave’ and the NOM-DAT verb *bekoren* ‘to please’.

- (218) a. <sup>(?)</sup>Gisteren was die hele Bert Mulder nog niet eens vertrokken.  
yesterday was that whole Bert Mulder yet not even left  
‘Yesterday, this whole Bert Mulder had not even left.’  
b. <sup>(?)</sup>Dat hele *Macbeth* kan me echt niet bekoren.  
that whole *Macbeth* can me really not please  
‘This *Macbeth* cannot please me.’

However, when we are dealing with an underlying subject, as in (219), the result is clearly ungrammatical (the only exception being cases such as given in (213), in which negative polar *heel* is licensed by another negative polarity item).

- (219) \*Die hele Bert Mulder was zijn wachtwoord vergeten.  
that whole Bert Mulder was his password forgotten

From the assumption that *heel* is a negative polarity item, the ungrammaticality of (219) follows straightforwardly: negative polarity items never occur as underlying subjects of main clauses. However, the acceptability of (217) and (218) shows again that the licensing conditions on negative polar *heel* phrases are different from those on negative polarity items like *ook maar iemand* ‘anyone’; in main clauses, the latter can never be used as the subject of passive constructions or of unaccusative verbs.

### C. The determiner preceding negative polar *heel*

An important interpretative property of the negative polar *heel* construction is that of condescension; Bert Mulder, for example, is clearly not held in great esteem by the speaker of (207d). Consistent with this is the fact that these constructions are typically used in combination with the distal demonstratives *die/dat*, which can themselves be used to express a negative evaluation on the part of the speaker; cf. Section 5.2.3.2.2, sub IV. More examples are given in (220a). The proximate demonstratives *deze/dit*, on the other hand, typically give rise to an awkward result in this context, and are altogether ruled out when the head noun is a proper noun, as is shown in (220b). Note, however, that (220c) shows that the negative polar *heel* construction is possible with the definite article, provided that the head noun is inherently evaluative.

- (220) a. Ik ken dat hele mens/wijf/vrouwte/meisje/Marietje niet.  
           I know that whole woman/bitch/little.lady/girl/Marietje not  
       b. Ik ken dit hele ?mens/?wif/?vrouwte/?meisje/\*Marietje niet.  
           I know this whole woman/bitch/little.lady/girl/Marietje not  
       c. Ik ken het hele mens/wijf/?vrouwte/?meisje/\*Marietje niet.  
           I know the whole woman/bitch/little.lady/girl/Marietje not

The examples in (221) show that use of the indefinite article *een* ‘a’ also leads to ungrammaticality. The unacceptability of these examples need not be related to the presence of negative polar *heel*, however, given that the direct object has been scrambled to the left of negation and we know independently that scrambling of nonspecific, indefinite noun phrases is impossible, as will also be clear from the fact that the examples in (221) are equally unacceptable without *heel*; cf. Section 8.1.3.

- (221) a. \*Ik had een (heel) mens niet gezien.  
           I had a whole person not seen  
       b. \*Ik ken een (heel) vent niet.  
           I know a whole guy not

To control for the scrambling effect with preservation of the licensing environment for the negative polar *heel*, the direct object would have to follow *niet*. However, as is discussed in Section 5.1.5, linear sequences of sentential *niet* and the indefinite article *een* are typically avoided, the determiner *geen* ‘no’ being used instead, as in (222). These examples, to the extent that they are acceptable in any context at all, certainly lack the specialized semantics of *heel* that we saw in the examples in (207).

- (222) a. \*Ik had geen heel mens gezien.  
           I had no whole person seen  
       b. \*Ik ken geen hele vent.  
           I know no whole guy

We may conclude from this that negative polar *heel* cannot be used in indefinite noun phrases headed by the articles *een* and *geen*, but it is still not clear whether this is due to a co-occurrence restriction between these determiners and negative polar *heel*, or to some other reason: we have already seen that the unacceptability of the examples in (221) is probably due to the ban on scrambling of nonspecific, indefinite noun phrases, and the unacceptability of the examples in (222) may be due to the restriction, discussed in the previous subsection, that negative polar *heel* phrases c-command their licenser. That we are dealing with a co-occurrence restriction is, however, suggested by the fact that negative polar *heel* is also blocked in indefinite phrases with the determiner *zo’n* ‘such a’: the examples in (223) show that such phrases may be scrambled, whereas negative polar *heel* is excluded in both the base and the derived position of such phrases.

- (223) a. Ik had <zo’n mens> nog nooit eerder <zo’n mens> gezien.  
           I had such a person yet never before seen  
           ‘I have never seen such a person before.’  
       a’. \*Ik had <zo’n heel mens> nog nooit <zo’n heel mens> gezien.

- b. dat ik <zo'n vent> nog nooit eerder <zo'n hele vent> ontmoet heb.  
 that I such a guy yet never before met have  
 'that I have never met such a guy before.'
- b'. \*dat ik <zo'n hele vent> nog nooit <zo'n hele vent> ontmoet heb.

The primeless examples in (224), finally, show that combining the negative polarity use of *heel* with prenominal possessors gives rise to a marked result; grammatical possessive examples can be obtained by placing the possessor in postnominal position, as in the primed examples.

- (224) a. <sup>??</sup>Ik had zijn hele auto niet gezien.  
 I had his whole car not seen
- a'. Ik had die hele auto van 'm niet gezien.  
 I had that whole car of him not seen
- b. <sup>??</sup>Ik ken zijn hele vader niet.  
 I know his whole father not
- b'. Ik ken die hele vader van 'm niet.  
 I know that whole father of him not

#### D. Comparing negative polar and quantificational *heel*

This section investigates whether the notion of totality, that is, the core meaning of post-determiner *heel*, is also relevant for the use of *heel* as a negative polar element; cf. the *Woordenboek der Nederlandsche Taal*, lemma *heel*, for an earlier discussion of this possibility. If so, examples of the type in (207) can be taken to express that the speaker's unfamiliarity with, indifference towards, or negative judgment about the entity denoted by the *heel* phrase extends to the entire entity, nothing being exempted. What may plead for such an approach is that negative polar *heel* cannot be combined with quantificational (pre- or post-determiner) *heel*. Consider the examples in (225), which are ambiguous between a quantificational and a negative polar interpretation of *heel*: on the latter reading *niet* is required, whereas on the former reading it is omissible (structurally speaking).

- (225) a. Ik ken heel die geschiedenis niet.  
 I know all that history not
- b. Ik ken die hele geschiedenis niet.  
 I know that whole history not

When we now turn to the examples in (226) we see that the forms of *heel* found in (225) cannot be combined with negative polarity item *heel* into a single noun phrase. For the negative polarity readings of *heel* in (225) this is of course straightforward, but on a quantificational interpretation of pre-determiner *heel* in (226a) and one of the two tokens of *heel* in (226b) it is not immediately obvious why these examples should be ill-formed. However, when we also treat negative polarity *heel* as a quantificational element, this may provide an explanation for the deviance of (226) given that double quantification is normally excluded.



- (226) a. \*Ik ken heel die hele geschiedenis niet.  
           I know all that whole history not  
       b. \*Ik ken die hele hele geschiedenis niet.  
           I know that whole whole history not

There is a reason, however, that the semantics of totality associated with negative polar *heel* should be attributed to the verb phrase containing the *heel* phrase, and not to the noun phrase. *Heel*, though syntactically construed with the noun phrase that contains it, seems semantically construed with the verb phrase, and teams up with the negation to express the notion of totality. This is clear from the fact that the function of *heel* in (227a) is more or less equivalent to that of the adverb *helemaal* in (227b). In other words, negative polar *heel* may °scope out of its noun phrase in a way similar to the determiner *geen*; cf. Section 5.1.5.1.1, sub I.

- (227) a. Ik ken die hele vent niet.  
           I know that whole guy not  
       b. Ik ken die vent helemaal niet.  
           I know that guy at all not

The particular form of *helemaal* used in (227b) is the one that bears no accent. There is an alternative form *helemáál*, with accent on the second syllable, which means “absolutely” (and alternates with *volstrekt*, *absoluut* ‘absolutely’), and it is interesting to note that it is only this form that can co-occur with negative polar *heel*; the unstressed form *helemaal* is incompatible with *heel* in its intended sense.

- (228) Ik ken die hele vent helemáál/\*helemaal niet.  
           I know that whole guy absolutely/at all not

The complementary distribution of negative polar *heel* and unstressed *helemaal* confirms their parallel functions, and supports our earlier conclusion that *heel* found in examples like (227a) and (228) is interpreted as a modifier of the VP in the sense that it has scope over the VP rather than over the noun phrase that includes it. It is therefore not evident whether the notion of totality is related to negative polar *heel* itself or is of a more compositional nature.

### 7.2.2. *Distribution of heel and its alternants inside the noun phrase*

This section discusses the noun-phrase internal syntactic distribution of *heel*. We start with an investigation of the properties of the bare form *heel* preceding determiners in Section 7.2.2.1, which is followed by a discussion of post-determiner inflectible *heel* in Section 7.2.2.2. Section 7.2.2.3 concludes with a brief comparison between *heel* and its variant *geheel* prefixed by *ge-*. Quantificational *heel* sometimes alternates with the form *gans*, but this will not be discussed here since it is an archaic form, not found in the present-day vernacular. It is essentially obsolete, living on in the frozen phrase *van ganser harte* ‘wholeheartedly’ (where it, in fact, does not alternate with *heel*).

### 7.2.2.1. Pre-determiner bare heel

This section presents a survey of the distribution of pre-determiner bare *heel* inside the noun phrase. We first discuss in Subsection I the noun phrase types that may contain this pre-determiner. This is followed in Subsection II by a discussion of the restrictions *heel* imposes on other elements within the noun phrase.

#### I. Bare heel and noun phrase types

Pre-determiner bare *heel* occurs in singular neuter and non-neuter, but not in plural count noun phrases. When we compare the distribution of bare *heel*, shown in Table 10, to that of bare *al*, given in Table 1 in Section 7.1.2.1, we observe that the two are each other's opposites in this respect.

Table 10: Bare heel in noun phrases headed by a count noun

|                           | SINGULAR [±NEUTER]                                                       | PLURAL [±NEUTER]                                           |
|---------------------------|--------------------------------------------------------------------------|------------------------------------------------------------|
| DEFINITE ARTICLES         | <i>heel de stad/het huis</i><br>all the town/the house                   | * <i>heel de steden/huizen</i><br>all the towns/houses     |
| DEMONSTRATIVE<br>PRONOUNS | <sup>(?)</sup> <i>heel die stad/dat huis</i><br>all that town/that house | * <i>heel die steden/huizen</i><br>all those towns/houses  |
|                           | <sup>?</sup> <i>heel deze stad/dit huis</i><br>all this town/this house  | * <i>heel deze steden/huizen</i><br>all these towns/houses |
| POSSESSIVE PRONOUNS       | <i>heel mijn stad/huis</i><br>all my town/house                          | * <i>heel mijn steden/huizen</i><br>all my towns/houses    |

Systematic exceptions to the ban on pre-determiner *heel* construed with plural noun phrases are formed by pluralia tantum and formal plurals that denote a conventionally fixed unit; cf. the examples in (229), two of which were given earlier as (168b&c) in Section 7.2.1.1. Despite the fact that the plurals in (229) behave syntactically like regular plurals (they trigger plural finite verb agreement, for example), they are compatible with pre-determiner bare *heel* because they denote single structured units, which are moreover exhaustively partitionable; cf. the discussion of the core meaning of bare *heel* in Section 7.2.1.1, sub I.

- (229) a. Heel de hersenen zijn aangetast door de tumor.  
all the brains are affected by the tumor  
b. El Niño heeft het klimaat in heel de tropen aangetast.  
El Niño has the climate in all the tropics affected  
c. Ik heb heel de Verenigde Staten doorgereisd.  
I have all the United States traveled through  
d. Hij is de bekendste politicus van heel de Antillen.  
he is the best-known politician of all the Antilles

To a certain extent, the complementary distribution of *heel* and *al* also holds for their distribution in noun phrases headed by a non-count noun, as will become clear by comparing Table 11 with Table 2 in Section 7.1.2.1.

Table 11: Bare heel in noun phrases headed by a non-count noun

|                        | SUBSTANCE NOUNS [±NEUTER]                             | MASS NOUNS                        |
|------------------------|-------------------------------------------------------|-----------------------------------|
| DEFINITE ARTICLES      | *heel de wijn/het water<br>all the wine/the water     | *?heel het vee<br>all the cattle  |
| DEMONSTRATIVE PRONOUNS | *heel die wijn/dat water<br>all that wine/that water  | *?heel dat vee<br>all that cattle |
|                        | *heel deze wijn/dit water<br>all this wine/this water | *?heel dit vee<br>all this cattle |
| POSSESSIVE PRONOUNS    | *heel mijn wijn/water<br>all my wine/water            | *?heel mijn vee<br>all my cattle  |

Table 11 shows that, unlike pre-determiner *al*, *heel* normally cannot occur in noun phrases headed by substance nouns. Examples like *heel de wijn/het water* become marginally acceptable, however, in contexts in which *wijn* and *water* are conceived of as countable bodies/units of liquid. An example like (230a) is marginally acceptable with an interpretation of *rode wijn* as a fixed quantity of red wine, for example, a collection of bottles in the cellar. Similarly, example (230b), found on the internet, refers to a contextually determined body of water, which is apparently divided into a number of subparts, that each hosts a number of the people referred to by the pronoun *we*. The fact that the examples in (230) trigger an interpretation that involves structured units follows naturally from the semantic characterization of the quantificational semantics of pre-determiner bare *heel* given in 7.2.1.1, sub I.

- (230) a. <sup>??</sup>Heel de rode wijn is op.  
all the red wine is up  
'All the red wine is finished.'
- b. We vissen [...] verspreid over heel het water.  
we fish scattered over all the water  
'We are fishing scattered across the water.'

With noun phrases headed by a mass noun, the complementarity in distribution between *heel* and *al* also seems to hold; the examples in (231a&b) are at best marginally possible. In (231c), *al* and *heel* seem to be equally acceptable, although a Google search revealed that the string [*al het verkeer*] occurs more than a hundred times as often as the string [*heel het verkeer*].

- (231) a. Al/<sup>\*?</sup>Heel het vee van boer Harms leed aan BSE.  
all the cattle of farmer Harms suffered from BSE
- b. Al/<sup>\*?</sup>Heel het fruit in de krat was beschimmeld.  
all the fruit in the crate was moldy
- c. Al/Heel het verkeer stond vast.  
all the traffic stood fast  
'All the traffic was jammed.'

The complementary distribution between *heel* and *al* also seems to break down in noun phrases headed by abstract non-count nouns; both *al* and *heel* seem to be possible in this case, with *heel* preceding noun phrases headed by a neuter noun being somewhat marked. As in the case of *al*, the constructions in (232) seem to

prefer a postnominal modifier or relative clause to be present. There is essentially no difference in meaning between the constructions with *heel* and *al*; example (232a), for instance, is semantically near-equivalent to *al de ellende van de wereld*.

- (232) a. *heel de ellende* <sup>?</sup>(van de wereld)  
 all the misery of the world  
 ‘all the misery in the world’  
 b. <sup>?</sup>*heel het verdriet dat ik heb meegemaakt*  
 all the sorrow that I have prt.-made  
 ‘all the sorrow that I have been through’

It must be noted, however, that the constructions with *al* are again much more frequent than those with *heel*, which is clear from a Google search performed in July 2008: the string [*al de ellende*] resulted in over 400 hits, whereas [*heel de ellende*] resulted in no more than 18 cases. The contrast was even bigger with [*al het verdriet*] and [*heel het verdriet*], which resulted in, respectively, 10,000 and 2 hits.

In the case of deverbal nouns, the complementarity in distribution again seems to break down. Table 12 shows that, although *heel* can at best marginally be combined with noun phrases headed by a nominal infinitive or GE-nominalization, *heel* can be combined with noun phrases headed by a bare stem; see Table 3 in Section 7.1.2.1 for the corresponding examples with *al*.

Table 12: Bare *heel* in noun phrases headed by a deverbal noun

|                           | BARE STEM                              | NOMINAL INFINITIVE                                        | GE-NOMINALIZATION                             |
|---------------------------|----------------------------------------|-----------------------------------------------------------|-----------------------------------------------|
| DEFINITE<br>ARTICLES      | <i>heel het werk</i><br>all the work   | <sup>*,?</sup> <i>heel het werken</i><br>all the working  | * <i>heel het gewerk</i><br>all the working   |
| DEMONSTRATIVE<br>PRONOUNS | <i>heel dat werk</i><br>all that work  | <sup>*,?</sup> <i>heel dat werken</i><br>all that working | * <i>heel dat gewerk</i><br>all that working  |
|                           | <i>heel dit werk</i><br>all this work  | * <i>heel dit werken</i><br>all this working              | * <i>heel dit gewerk</i><br>all this working  |
| POSSESSIVE<br>PRONOUNS    | <i>heel mijn werk</i><br>all this work | * <i>heel mijn werken</i><br>all this working             | * <i>heel mijn gewerk</i><br>all this working |

It must be noted, that, just as in the cases with *al*, bare stems with *heel* only give rise to an acceptable result when they receive an eventive interpretation (and not when they have a result reading). Consider the contrast between the primeless and primed examples in (233).

- (233) a. \**heel de aankomst/aanvang* [cf. \**al de aankomst/aanvang*]  
 all the arrival/beginning  
 a'. *heel de aankomst van Sinterklaas*  
 all the arrival of Santa Claus  
 b. \**heel het begin/vertrek* [cf. \**al het begin/vertrek*]  
 all the beginning/departure  
 b'. *heel het begin van de film*  
 all the beginning of the movie

This contrast is one of result versus state-of-affairs nouns, that is, one of the absence or presence of temporal extension. While an arrival is normally conceived of as momentaneous or punctual, in a context like that given in (233a') it is not: the arrival of Sinterklaas (a benefactor of children who, in accordance with the Dutch tradition, arrives by boat from Spain around a fortnight before his birthday on the 5<sup>th</sup> of December) is an event with significant temporal extension. Similarly, while a beginning of something is usually a momentary, point-like event on a temporal scale, the beginning of a movie (that is, the set of scenes which together constitute the opening of the movie) has a temporal extension. This temporal extension is responsible for the acceptability of *heel* in the primed examples. Note that the role played by temporal extension in deverbal noun phrases headed by nouns like *aankomst* 'arrival' or *begin* 'beginning' confirms the characterization of the semantics of pre-determiner bare *heel* as an exhaustive partitioner. While point-like events are not partitionable on a temporal scale, events that have temporal extension are; hence the latter are compatible with bare *heel* whereas the former are not.

## *II. Restrictions on accompanying determiners and quantificational elements*

This subsection investigates the restrictions that pre-determiner bare *heel* poses on the presence of determiners and other quantificational elements. A preliminary observation to be made is that the noun phrase following *heel* are more limited syntactically than the corresponding constructions without *heel*; with the former, attributive modifiers seem to be restricted to cases where the adjective and the noun form more or less fixed collocations. The examples in (234) present three minimal pairs (judgments are ours, but confirmed by a small number of informants).

- (234) a. *heel die grote, boze/?prachtige wereld*  
           all that big angry/beautiful world  
       b. *heel de grote/?drukke stad*  
           all the big/busy town  
       c. *heel dat ?ondraaglijke/?uitputtende lijden*  
           all that unbearable/exhausting suffering

The acceptable examples all seem to involve a close semantic coherence between the adjective and the noun: *de grote, boze wereld* is an idiom ('the wretched world'), *de grote stad* almost functions like a compound (cf. German *Großstadt* 'big-town'), and *ondraaglijk* is a stereotypical modifier of *lijden*. The markedness of non-collocational attributive modifiers in bare *heel* constructions could perhaps be related to the "exhaustive partitioning" semantics of bare *heel*; the presence of a regular, attributive modifier possibly obstructs the partitioning necessary for the interpretation of pre-determiner bare *heel*.

### *A. Determiners*

Table 10 has shown that pre-determiner bare *heel* can be used with all types of determiners, although it is not fully compatible with the distal and, especially, the proximate demonstrative pronouns. The relevant examples are repeated here as (235).

- (235) a. heel de/<sup>(?)</sup>die/<sup>?</sup>deze/mijn stad  
           all the/that/this/my town  
       b. heel het/<sup>(?)</sup>dat/<sup>?</sup>dit/mijn huis  
           all the/that/this/my house

The proximate demonstrative examples improve up to the point of full acceptability, however, in contrastive contexts of the type in (236). Constructions of the type in (236a) can be normally be “simplified” by Backward °Conjunction Reduction and NP-ellipsis, but they deliver robustly different results in the context of pre-determiner *heel*. While Backward Conjunction Reduction in the primed examples gives rise to a perfectly grammatical result, the NP-ellipsis cases in the doubly-primed examples are unacceptable (and certainly considerably worse than the corresponding examples with pre-determiner bare *al* given in Section 7.1.2.1, sub II).

- (236) a. Ik ken wel heel DEze stad, maar niet heel DIE stad.  
       a'. Ik ken wel heel DEze Ø, maar niet heel DIE stad. [RNR]  
       a''. \*Ik ken wel heel DEze stad, maar niet heel DIE Ø. [NP-ellipsis]  
           I know AFF all this town but not all that town  
       b. Ik ken wel heel DIT huis, maar niet heel DAT huis.  
       b'. Ik ken wel heel DIT Ø, maar niet heel DAT huis. [RNR]  
       b''. \*Ik ken wel heel DIT huis, maar niet heel DAT Ø. [NP-ellipsis]  
           I know AFF all this house but not all that house

The examples in (237a-c) show that bare *heel* can precede not only possessive pronouns, but also (semi-)genitival possessive phrases. The somewhat marked status of (237c) is probably due to the heaviness of the overall construction.

- (237) a. heel mijn wereld  
           all my world  
       b. heel mijn vaders wereld  
           all my father's world  
       c. <sup>?</sup>heel mijn vader z'n wereld  
           all my father his world

Example (238b) shows that bare *heel* may also precede nominalized possessive pronouns. This supports the suggestion made in Section 5.2.2.5.2 that noun phrases like *de jouwe* do not involve ellipsis, since otherwise we would expect examples with strings *heel de jouwe* to be as bad as the doubly-primed examples in (236).

- (238) a. Heel mijn fiets glimt, maar heel jouw fiets is roestig.  
           all my bike shines but all your bike is rusty  
       b. Heel mijn fiets glimt, maar heel de jouwe is roestig.  
           all my bike shines but all yours is rusty

Pre-determiner bare *heel* cannot be construed with noun phrases containing the indefinite article *een*: this is shown in (239a&b) for, respectively, [+COUNT] and [-COUNT] nouns. Pre-determiner bare *heel* cannot combine with bare noun phrases either: (239b&c) illustrate this for, respectively, bare singulars and bare pluralia

tantum. Note that we diverge here from Zwarts (1992: 156), who assigns *\*heel een ijsje* ‘all an ice-cream’ a mere question mark; our informants generally agree that examples of this type are unacceptable.

- (239) a. *\*heel een stad/huis*  
           all   a town/house  
       b. *\*heel een/Ø ellende*  
           all   a/Ø   misery  
       c. *Die jongen heeft (\*heel) Ø hersens!*  
           that boy   has   all       brains

An exception to this ban on *heel* preceding indefinite determiners is when the latter combines with *zo* to form the indefinite demonstrative *zo’n* ‘such a’; cf. Section 5.2.3.1.1. In order for *heel* to be acceptable, however, the head noun must be a count noun. Recall that the count/non-count distinction does not have the same influence on the distribution of pre-determiner *heel* in the case of a definite demonstrative; both *heel die stad* and *heel die ellende* are acceptable.

- (240) a. *heel zo’n stad/huis*  
           all   such a town/house  
       b. *\*heel zo’n ellende*  
           all   such sorrow

### *B. Indefinite determiner-like elements*

Although pre-determiner bare *heel* can precede the indefinite demonstrative *zo’n* ‘such a’ in (240a), it cannot precede the indefinite determiner-like elements *zulk/dergelijk/van die* ‘such’. No doubt, this is related to the fact that these determiners are normally followed by plural count nouns, which are banned from this construction anyway. The fact that the constructions in (241), which involve non-count nouns, are also unacceptable patterns nicely with the fact that such examples are also impossible with *zo’n*.

- (241) a. *\*heel zulke/dergelijke/van die ellende*  
           all   such                           misery  
       b. *\*heel zulke/dergelijke/van die wijn*  
           all   such                           wine

We may conclude from the data so far that *heel* must be linearly followed by a definite determiner or by *zo’n*. We phrase this statement in linear terms in order to capture the difference in acceptability between *zulk/dergelijk soort* and their semantic equivalents *dit/dat soort*; (242a) shows that the latter are grammatical, which, we claim, is due to the fact that they themselves are introduced by a demonstrative which linearly follows *heel* in the output string. Example (242b) shows that the contrast in (242a) does not show up with pre-determiner bare *al*.

- (242) a. *heel dat/dit/\*zulk soort gedoe*  
           all   that/this/such sort   fuss  
       b. *al   dat/dit/zulk soort gedoe*  
           all   that/this/such sort   fuss

Section 7.1.2.1, sub IIB, concluded that *al* in (242b) forms a constituent with *dat/dit/zulk soort*, on the basis of the fact that *al dat/dit/zulk soort N* may appear as a subject in existential *er* constructions. For *heel*, such a case cannot be made since it is impossible to establish on independent grounds whether *heel* is a strong or weak quantifier: addition of *heel* to a noun phrase does not affect the weak/strong status of that noun phrase. Nevertheless, a possible way of eliminating the reference to linearity in the characterization of the relationship between *heel* and the determiner following it is by analyzing *heel dat/dit soort* in (242a) as a constituent as well. Although this analysis seems structurally plausible, a potential semantic problem for it is that *heel* is construed with *gedoe* rather than with *soort*.

### C. Quantifiers and numerals

Pre-determiner bare *heel* cannot precede quantifiers like *enige/sommige* ‘some’ and *elk/ieder* ‘every’.

- (243) a. \**heel enige ellende/verdriet*  
           all   some misery/sorrow  
       b. \**heel elke/iedere stad*  
           all   every       town  
       b'. \**heel elk/ieder huis*  
           all   every       house

Since Table 10 has shown that bare *heel* does not combine with plural noun phrases, it will not come as a surprise that adding a numeral to the noun phrase to the right of *heel* is normally impossible. It seems, however, that example (244a) is acceptable (though marked) on the negative polarity reading of *heel* described in Section 7.2.1.1, sub II.

- (244)   <sup>#</sup>*heel die twee steden*  
           all   those two towns

In the discussion of bare *al* in Section 7.1.2.1, sub IIC, it was pointed out that adding an inflected quantifier like *vele* ‘much/many’ or *weinige* ‘little/few’ to the noun phrase following *al* is possible for some speakers, though always rather marginal. The relevant examples are reproduced here in (245a&a’). Examples (245b&b’) show that adding pre-determiner bare *heel* to such constructions is impossible with *weinige* and gives rise to, at best, a degraded result with *vele*.

- (245) a.   *de (vele/weinige) mensen in de zaal*  
           the many/few   people   in the room  
       a'.   *al de (<sup>?</sup>vele/<sup>??</sup>weinige) mensen in de zaal*  
           all the   many/few   people   in the room  
       b.   *het (vele/weinige) lijden in de wereld*  
           the much/little   suffering in the world  
       b'.   *heel het (<sup>??</sup>vele/\*weinige) lijden in de wereld*  
           all the   much/little   suffering in the world

For completeness’ sake, note that *heel* can precede the quantifiers *veel* and *weinig*, when it acts as a modifier of the quantifiers; cf. Section 6.2.5. That *heel* in



(246) is a premodifier of the quantifier, and not of the noun phrase as a whole (as a pre-determiner of the zero indefinite article), is evident from the fact that the plural count nouns and substance noun *wijn* normally cannot co-occur with pre-determiner bare *heel*; cf. Table 10 and Table 11.

- (246) a. [(heel) veel] boeken                      b. [(heel) weinig] wijn  
              very many books                      very little      wine

D. Personal pronouns and proper nouns

We can be brief about the combination of pre-determiner bare *heel* and personal pronouns; *heel* is unable to combine with pronouns, regardless of whether it is placed to the left or to the right of the pronoun. Example (247) only shows this for *heel* preceding the pronoun.

(247) Bare *heel* and personal pronouns

|                        |           | SINGULAR          | PLURAL              |
|------------------------|-----------|-------------------|---------------------|
| 1 <sup>ST</sup> PERSON |           | *heel ik/me/mij   | *heel wij/ons *heel |
| 2 <sup>ND</sup> PERSON | REGULAR   | *heel jij/je/jou  | *heel jullie        |
|                        | POLITE    | *heel u           |                     |
| 3 <sup>RD</sup> PERSON | MASCULINE | *heel hij/'m/hem  | *heel zij/hen/hun   |
|                        | FEMININE  | *heel zij/'r/haar |                     |
|                        | NEUTER    | *heel het/'t      |                     |

As was pointed out in Section 7.2.1.1, bare *heel* can combine with proper nouns that comply with the semantic constraint imposed by *heel* that the noun phrase it is construed with denotes a structured unit. We refer the reader to Section 7.2.1.1, sub I, for a more extensive discussion, and to Section 7.1.2.1, sub IID, for comparison with similar examples with *al*.

- (248) a. heel Europa/Duitsland/Hongarije/Italië/Amsterdam  
              all Europe/Germany/Hungary/Italy/Amsterdam  
      b. \*heel Jan  
              all Jan

Finally, we can note that, unlike bare *al* (cf. 7.1.2.1, sub IID), *heel* cannot precede the *wh*-word *wat* in free relatives, but it can form a constituent with *wat* in the guise of a quantified pronoun. Note that, while indefinite *wat* normally alternates with *iets* ‘something’, replacement of *wat* by *iets* is impossible in (249b).

- (249) a. al/\*heel wat ik hoor  
              all      what I hear  
      b. Ik heb heel/\*al wat gehoord.  
              I have all      what heard  
              ‘I have heard quite a lot.’

7.2.2.2. Post-determiner inflectible *heel*

This section will discuss the properties of inflectible *heel*. Again, a distinction has to be made between purely adjectival and quantificational uses of *heel*. Section

7.2.2.2.1 will start with a discussion of adjectival *heel*, and show that it behaves like an ordinary attributive adjective in its syntactic distribution. Section 7.2.2.2.2 subsequently focuses exclusively on quantificational *heel*. Whereas bare *heel* was seen to correspond closely to bare *al*, the schwa-inflected form *hele* is different from both bare *heel* and schwa-inflected *alle*. From the former it differs in being capable of combining with plural noun phrases on its adjectival use; from the latter it is different in not being in complementary distribution with the determiners.

#### 7.2.2.2.1. Adjectival heel

Adjectival *heel* ‘whole’ occurs in singular and plural count noun phrases, as illustrated in Table 13. This form of post-determiner *heel* often alternates with adjectives denoting completeness/totality; examples include *compleet* ‘completely’, *totaal* ‘totally’, and *geheel* ‘completely’. The adjective *geheel* (which is derived from *heel* by means of the prefix *ge-*) is discussed in Section 7.2.2.3.

Table 13: Adjectival *heel* in noun phrases headed by a count noun

|                        | SINGULAR                                  |                                          | PLURAL                                                                   |
|------------------------|-------------------------------------------|------------------------------------------|--------------------------------------------------------------------------|
|                        | [-NEUTER]                                 | [+NEUTER]                                |                                                                          |
| DEFINITE ARTICLES      | <i>de hele taart</i><br>the whole cake    | <i>het hele glas</i><br>the whole glass  | <i>de hele taarten/glazen</i><br>the whole cakes/glasses                 |
| DEMONSTRATIVE PRONOUNS | <i>die hele taart</i><br>that whole cake  | <i>dat hele glas</i><br>that whole glass | <i>die hele taarten/glazen</i><br>those whole cakes/glasses              |
|                        | <i>deze hele taart</i><br>this whole cake | <i>dit hele glas</i><br>this whole glass | <i>deze hele taarten/glazen</i><br>these whole cakes/glasses             |
| POSSESSIVE PRONOUNS    | <i>mijn hele taart</i><br>my whole cake   | <i>mijn hele glas</i><br>my whole glass  | <sup>(c)</sup> <i>mijn hele taarten/glazen</i><br>my whole cakes/glasses |

Although adjectival *heel* can readily be combined with plural count nouns, it is difficult to find pragmatically felicitous examples with pluralia tantum; example (250a) may work reasonably well on an interpretation of *heel* as *gaaf* ‘unscathed/intact/unaffected’; the status of (250a) is the same as that of the relative clause paraphrase in (250b), where *heel* is a predicate.

- (250) a. <sup>#</sup>*de hele hersenen*  
the whole brains  
‘the whole/intact brain’  
b. <sup>#</sup>*de hersenen<sub>i</sub> [die<sub>i</sub> (nog) heel zijn]*  
the brains that still whole are  
‘the brain that is (still) intact’

For formal plurals that denote a conventionally fixed unit, no context can be found in which adjectival *heel* can plausibly be used as a modifier meaning ‘whole, intact’; the next section will show that *heel* receives a quantificational reading in this context. The lexical semantics of adjectival *heel* also makes it impossible for it to be combined with non-count nouns.

Since adjectival *heel* is a regular adjective, its distribution in the noun phrase is identical to that of other adjectives of the same semantic type (that is, the non-gradable adjectives). The reader is referred to Broekhuis (to appear) for discussion of the adjectival phrase. In what follows the discussion of post-determiner inflectible *heel* will focus on its quantificational uses.

7.2.2.2.2. *Quantificational heel*

This section presents a survey of the distribution of post-determiner inflectible *heel* inside the noun phrase. We first discuss in Subsection I the noun phrase types that may contain this post-determiner. This is followed in Subsection II by a discussion of the restrictions *heel* imposes on other elements within the noun phrase.

I. *Quantificational inflectible heel and noun phrase types*

Table 14 shows that quantificational *heel* can be placed to the right of a determiner in neuter and non-neuter singular count noun phrases. It is difficult, however, to add quantificational *heel* to the right of a determiner in plural noun phrases.

Table 14: Post-determiner [+Q] *heel* in noun phrases headed by definite count nouns

|                        | SINGULAR                                 |                                          | PLURAL                                                        |
|------------------------|------------------------------------------|------------------------------------------|---------------------------------------------------------------|
|                        | [-NEUTER]                                | [+NEUTER]                                |                                                               |
| DEFINITE ARTICLES      | <i>de hele stad</i><br>the whole town    | <i>het hele huis</i><br>the whole house  | * <i>de hele steden/huizen</i><br>the whole towns/houses      |
| DEMONSTRATIVE PRONOUNS | <i>die hele stad</i><br>that whole town  | <i>dat hele huis</i><br>that whole house | ? <i>die hele steden/huizen</i><br>those whole towns/houses   |
|                        | <i>deze hele stad</i><br>this whole town | <i>dit hele huis</i><br>this whole house | *? <i>deze hele steden/huizen</i><br>these whole towns/houses |
| POSSESSIVE PRONOUNS    | <i>mijn hele stad</i><br>my whole town   | <i>mijn hele huis</i><br>my whole house  | * <i>mijn hele steden/huizen</i><br>my whole towns/houses     |

The grammaticality judgments on the plural noun phrases seem determined by the semantics of *heel*. Section 7.2.1.2.2 has shown that post-determiner *heel* has a variety of quantificational interpretations; totality, degree and negative polarity are the three main instantiations. The core quantificational semantics of totality is the most salient component of the interpretation of singular examples. In the plural examples, on the other hand, the totality reading is unavailable, or at least very hard to get, which accounts for the unacceptability of most of these cases. The plural examples involving the distal demonstrative *die* (and perhaps to a lesser degree also those with the proximate demonstrative *deze*) are reasonably felicitous due to the fact that they allow a negative polarity reading. Degree interpretations are typically reserved for determiner-less plurals like (251).

- (251)    Ø *Hele steden/huizen* werden verwoest.  
          Ø entire towns            were        destroyed

Since pluralia tantum and group-denoting plurals preceded by the definite article refer to a unit, they are eligible for a totality interpretation of *hele*, in contrast to the regular plurals in Table 14.

- (252) a. de hele hersenen                      c. de hele Verenigde Staten  
           the whole brains                      the whole United States  
       b. de hele tropen                        d. de hele Antillen  
           the whole tropics                    the whole Antilles

Quantificational *hele* can also be construed with abstract non-count nouns, although adding *hele* to a substance noun is difficult if at all possible: in Table 15, we only show this for [-NEUTER] nouns. Adding post-determiner *heel* to noun phrases headed by mass nouns gives rise to a degraded result. Post-determiner *heel* matches pre-determiner bare *heel* perfectly in this regard. Note that the examples with the distal demonstratives *die/dat* are perfectly acceptable on a negative polarity reading.

Table 15: Post-determiner [+Q] *heel* in noun phrases headed by a non-count noun

|                           | SUBSTANCE NOUNS                            | ABSTRACT NOUNS                                | MASS NOUNS                                  |
|---------------------------|--------------------------------------------|-----------------------------------------------|---------------------------------------------|
| DEFINITE<br>ARTICLES      | * <i>de hele wijn</i><br>the whole wine    | <i>de hele ellende</i><br>the whole misery    | ?? <i>het hele vee</i><br>the whole cattle  |
| DEMONSTRATIVE<br>PRONOUNS | * <i>die hele wijn</i><br>that whole wine  | <i>die hele ellende</i><br>that whole misery  | ?? <i>dat hele vee</i><br>that whole cattle |
|                           | * <i>deze hele wijn</i><br>this whole wine | <i>deze hele ellende</i><br>this whole misery | ?? <i>dit hele vee</i><br>this whole cattle |
| POSSESSIVE<br>PRONOUNS    | * <i>mijn hele wijn</i><br>my whole wine   | <i>zijn hele ellende</i><br>his whole misery  | ?? <i>mijn hele vee</i><br>my whole cattle  |

The parallel between *hele* and *heel* extends further. The examples in (253) show that, as in the case of bare pre-determiner *heel* in (230), contexts in which *wijn* and *water* are conceived of units/bodies of liquid are at least marginally possible; example (253b) is again taken from the internet. Furthermore, as in the case of pre-determiner *heel* in (231), examples like (254c) are well-formed. The totality semantics of post-determiner *heel* is responsible for this contrast; the discussion in Section 7.2.2.1, sub I, therefore largely carries over to the present examples.

- (253) a. <sup>?</sup>De hele rode wijn is op.  
           the whole red wine is up  
           ‘The red wine is completely finished.’  
       b. Verspreid het voer zoveel mogelijk over het hele water.  
           scatter the feed as.much.as possible over the whole water  
           ‘Scatter the feed as much as possible across the water.’
- (254) a. <sup>??</sup>Het hele vee van boer Harms leed aan BSE.  
           the whole cattle of farmer Harms suffered from BSE  
       b. <sup>??</sup>Het hele fruit in de krat was beschimmeld.  
           the whole fruit in the crate was moldy  
       c. Het hele verkeer stond vast.  
           the whole traffic stood fast [≈ was jammed]

Post-determiner *heel* is also possible with deverbal bare stem nouns, just like pre-determiner *heel* in Table 12. The examples involving nominal infinitives and

GE-nominalizations are perhaps somewhat better than in the case of pre-determiner *heel*, but still distinctly odd.

Table 16: Post-determiner [+Q] *heel* in noun phrases headed by a deverbal noun

|                           | BARE STEM                                | NOMINAL INFINITIVE                                          | GE-NOMINALIZATION                                           |
|---------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| DEFINITE<br>ARTICLES      | <i>het hele werk</i><br>the whole work   | <sup>*/?</sup> <i>het hele werken</i><br>the whole working  | <sup>*/?</sup> <i>het hele gewerk</i><br>the whole working  |
| DEMONSTRATIVE<br>PRONOUNS | <i>dat hele werk</i><br>that whole work  | <sup>??</sup> <i>dat hele werken</i><br>that whole working  | <sup>??</sup> <i>dat hele gewerk</i><br>that whole working  |
|                           | <i>dit hele werk</i><br>this whole work  | <sup>??</sup> <i>dit hele werken</i><br>this whole working  | <sup>??</sup> <i>dit hele gewerk</i><br>this whole working  |
| POSSESSIVE<br>PRONOUNS    | <i>mijn hele werk</i><br>this whole work | <sup>??</sup> <i>mijn hele werken</i><br>this whole working | <sup>??</sup> <i>mijn hele gewerk</i><br>this whole working |

It must be noted, however, that *hele* felicitously combines with a nominal infinitive in the idiom in (255a). That we are dealing with a nominal infinitive here is evident from the fact that *eten* takes an NP-complement to its left; see Section 2.2.3.2 for the structure of such nominal infinitives. As is shown in (255b), the GE-nominalization *gedoe* ‘fuss’ can also be preceded by *hele*.

- (255) a. Dat is het hele eieren eten.  
          that is the whole eggs eat  
          ‘That is all there is to it.’  
      b. Ik ben het/dat hele gedoe zat.  
          I am the/that whole fuss fed.up  
          ‘I am fed up with the/that whole fuss.’

The extent to which deverbal nouns like [-NEUTER] *aankomst* ‘arrival’ and *aanvang* ‘beginning’ or [+NEUTER] *begin* ‘beginning’ and *vertrek* ‘departure’ are compatible with post-determiner *heel* depends on the interpretation of the nominalization; the examples in (256) have more or less the same status as examples with pre-determiner bare *heel* in (233), and the discussion of the latter examples in Section 7.2.2.1, sub I, carries over seamlessly to the present examples with post-determiner *heel*.

- (256) a. <sup>#</sup>de hele aankomst/aanvang      a’. de hele aankomst van Sinterklaas  
          the whole arrival/beginning      the whole arrival of Santa Claus  
      b. <sup>#</sup>het hele begin/vertrek      b’. het hele begin van de film  
          the whole beginning/departure      the whole beginning of the movie

The primeless examples in (256) are marked with a number sign because, although they are unacceptable on the intended quantificational reading of totality, they are possible with a negative polarity interpretation. This reading is brought to the fore by the context given in (257).

- (257) Toen ging ineens de hele aankomst/het hele vertrek niet door.  
          then went suddenly the whole arrival/the whole departure not through  
          ‘Then all of a sudden the whole arrival/departure was cancelled.’

## II. Restrictions on accompanying determiners and quantificational elements

This section investigates the restrictions that *heel* poses on the presence of determiners and quantificational elements. The internal syntax of noun phrases is not affected by the presence of post-determiner inflectible *heel*: whereas Section 7.2.2.1, sub II, found that the extent to which noun phrases are fit to be quantified by pre-determiner bare *heel* is in part determined by the presence or absence of attributive modifiers of the head noun, there are no such interrelations between inflectible *heel* and attributive adjectives. Post-determiner *heel* readily combines with noun phrases containing attributively used adjectives.

- (258) a. die <hele> boze/prachtige <\*hele> wereld  
           that whole angry/beautiful world  
       b. de <hele> lekkere <hele> taart  
           the whole nice cake

Example (258a) illustrates that *heel* surfaces to the left of the attributive adjective on its quantificational interpretations (totality, degree or negative polarity). On its purely adjectival reading in (258b), on the other hand, *heel* can be placed on either side of attributive adjectives, the choice depending on contextualization; see Section A5.5.3 for the relative ordering of stacked adjectives. Note in passing that in (258b) *hele* can also be interpreted as an °intensifier of the adjective *lekkere* when it precedes it.

### A. Determiners

Table 14 has shown that the distribution of post-determiner quantificational *heel* is tightly connected to the nature of the definite determiner that heads the noun phrase in which *heel* occurs. Here, we repeat the main findings. First, the determiners of the singular noun phrases in Table 14 deliver a totality reading of *heel*. Second, the determiners of the plural noun phrases obstruct a totality reading of *heel*, and, as a result, plural examples like *de hele steden* are not well-formed. Finally, the distal demonstrative *die* ‘that/those’ can give rise to a negative polarity interpretation of post-determiner *heel*, which accounts for the fact that the plural noun phrase *die hele steden* is more or less well-formed.

The distal and proximate demonstratives can receive contrastive accent in the presence of post-determiner *heel*, as illustrated by (259). Backward °Conjunction Reduction and NP-ellipsis are possible in these examples, but only when *hele* is stripped along with the rest of the noun phrase; leaving *hele* behind in these examples is very marginal in the RNR cases and quite impossible in the NP-ellipsis ones. In this regard, post-determiner *hele* behaves like *beide*, as discussed in Section 7.1.2.2.1, sub II.

- (259) a. Ik ken wel DEZe hele stad, maar niet DIE hele stad.  
       a'. Ik ken wel DEZe (°hele) Ø, maar niet DIE hele stad. [RNR]  
       a''. Ik ken wel DEZe hele stad, maar niet DIE (\*hele) Ø. [NP-ellipsis]  
           I know AFF this whole town but not that whole town

- b. Ik ken wel DIT hele huis, maar niet DAT hele huis.  
b'. Ik ken wel DIT (<sup>??</sup>hele) Ø, maar niet DAT hele huis. [RNR]  
b''. Ik ken wel DIT hele huis, maar niet DAT (\*hele) Ø. [NP-ellipsis]  
I know AFF this whole house but not that whole house

In singular noun phrases, post-determiner inflectible *heel* readily follows possessives of all kinds, pronominal, genitive and semi-genitival possessives alike. In all examples in (260), *heel* has the quantificational semantics of totality; no degree or negative polarity readings are available for *heel* embedded in possessed noun phrases.

- (260) a. mijn hele vermogen/bezit  
my whole fortune/estate  
b. mijn vaders hele vermogen/bezit  
my father's whole fortune/estate  
c. mijn vader z'n hele vermogen/bezit  
my father his whole fortune/estate

Table 17 shows that post-determiner *heel* may also occur in indefinite singular noun phrases, provided that a determiner is present: the ungrammaticality of the determiner-less examples indicates that, unlike quantifiers like *elk* 'every' or *ieder* 'each' (cf. Section 6.2), *heel* cannot perform the role of a determiner or determiner-substitute of singular noun phrases. Table 17 also shows that *heel* inflects with schwa depending on the gender of the head noun, just like attributive adjectives in noun phrases with the singular, indefinite article *een* (cf. Section 3.2.1); neuter head nouns feature *heel*, non-neuter ones *hele*.

Table 17: Post-determiner [+Q] *heel* in noun phrases headed by indefinite count nouns

|                                  | COUNT NOUNS                          |                                       | NON-COUNT NOUNS                           |                                            |
|----------------------------------|--------------------------------------|---------------------------------------|-------------------------------------------|--------------------------------------------|
|                                  | [-NEUTER]                            | [+NEUTER]                             | [-NEUTER]                                 | [+NEUTER]                                  |
| INDEFINITE<br>ARTICLE <i>een</i> | <i>een hele stad</i><br>a whole town | <i>een heel huis</i><br>a whole house | <i>een hele ellende</i><br>a whole misery | <i>een heel verdriet</i><br>a whole sorrow |
| INDEFINITE<br>ARTICLE Ø          | *Ø <i>hele stad</i><br>Ø whole town  | *Ø <i>heel huis</i><br>Ø whole house  | *Ø <i>hele ellende</i><br>Ø whole misery  | *Ø <i>heel verdriet</i><br>Ø whole sorrow  |

Although the non-count and count nouns examples are syntactically similar, they are semantically distinct. With the count nouns, post-determiner *heel* contributes a totality interpretation whereas with the non-count nouns *heel* receives a degree reading; an example like *een hele ellende* is best rendered as *quite a misery*. Finally, note that post-determiner *heel* is excluded in plural noun phrases containing exclamatives of the type *een (\*hele) boeken dat hij heeft!*

B. Indefinite determiner-like elements

The examples in (261a&b) show that post-determiner *heel* can follow not only the indefinite article *een* but also indefinite determiners like *zo'n* 'such a' in (261), where *heel* receives a totality interpretation. Note that (261c) is ungrammatical; *hele* apparently cannot express a "quite" degree when it is preceded by *zo'n*.

- (261) a. zo'n hele stad  
           such a whole town  
       b. zo'n heel dorp  
           such a whole village  
       c. \*zo'n hele ellende  
           such a whole misery

It is impossible for post-determiner *heel* to combine with *een dergelijk(e)* 'such a' with *heel* standing to the left of *dergelijk(e)*. With *heel* to the right of *dergelijk(e)* the result is grammatical, but only on the adjectival reading "whole, intact". Since this reading is not compatible with the nouns *stad* and *ellende*, the examples in (262c&d) are degraded under all readings.

- (262) a. een <\*hele> dergelijke <#hele> taart  
           a whole such cake  
       b. een <\*hele> dergelijke <#hele> appel  
           a whole such apple  
       c. \*een <hele> dergelijke <hele> stad  
           a whole such town  
       d. \*een <hele> dergelijke <hele> ellende  
           a whole such misery

The examples in (263) also show that inflectible *heel* cannot precede the indefinite determiner-like elements *dat/dit/zulk soort* and *zulke/dergelijke/van die* 'such' either. The unacceptability of the examples in (263a&b) on the intended reading is, of course, not surprising given that quantificational *heel* normally cannot be used in plural noun phrases; these examples allow only adjectival *heel*. The unacceptability of (263c&d) with *heel* shows, however, that the indefinite determiner-like elements under discussion are not compatible with quantificational *heel*; the adjectival interpretation of post-determiner is also excluded due to the previously mentioned incompatibility of the meaning of adjectival *heel* and the noun *ellende*.

- (263) a. <\*hele> dat/dit/zulk soort <#hele> taarten  
           whole that/this/such sort cakes  
       b. <\*hele> zulke/dergelijke/van die <#hele> taarten  
           whole such cakes  
       c. <\*hele> dat/dit/zulk soort <\*hele> ellende  
           whole that/this/such sort whole misery  
       d. <\*hele> zulke/dergelijke/van die <\*hele> ellende  
           whole such whole misery

### C. Quantifiers and numerals

It seems that post-determiner inflectible *heel* cannot be combined with other quantifiers on its quantificational reading. It is possible for *heel* to follow the quantifiers *enige* and *sommige*, but then it will be construed as purely adjectival, meaning "whole, intact". The same thing holds when *heel* follows the quantifiers *veel* and *weinig*.



- |          |                                    |              |                                      |              |
|----------|------------------------------------|--------------|--------------------------------------|--------------|
| (264) a. | enige/sommige ( <sup>#</sup> hele) | appels       | a'. veel/weinig ( <sup>#</sup> hele) | appels       |
|          | some                               | whole apples | many/few                             | whole apples |
| b.       | *enige/sommige (hele)              | ellende      | b'. veel/weinig (*hele)              | ellende      |
|          | some                               | whole misery | much/little                          | whole misery |

Of course, three of the four examples in (264) are excluded for independent reasons: the (a)-examples are excluded because quantificational *heel* normally cannot be used in plural noun phrases, and (264b) is excluded because *enige* and *sommige* must be followed by a count noun. This leaves (264b') as evidence for the claim that quantificational *heel* cannot be combined with other quantifiers. However, this claim is also supported by the fact that the syntactically singular noun phrases in (265) give rise to a degraded result on the intended reading: these examples are only acceptable with a purely adjectival interpretation of *heel*.

- |          |                                  |             |
|----------|----------------------------------|-------------|
| (265) a. | elke/iedere ( <sup>#</sup> hele) | appel       |
|          | every                            | whole apple |
| b.       | elk/ieder ( <sup>#</sup> heel)   | huis        |
|          | every                            | whole house |
| c.       | elke/iedere ( <sup>#</sup> hele) | stad        |
|          | every                            | whole town  |

Quantificational post-determiner *heel* is not compatible with attributively used quantifiers either; example (266a), in which *heel* occurs to the right of the quantifiers in question, is only acceptable on the adjectival reading of *heel*; the noun *lijden* in (266b) does not readily allow the adjectival reading, and its unacceptability therefore shows that a totality reading is unavailable in such cases. The examples in (267) show that a negative polarity reading for *heel* is also impossible in this context. For completeness' sake, note that (266b) and (267a) do allow an interpretation in which *hele vele* is construed as a phrase meaning "very much/many".

- |          |       |          |                   |        |                               |
|----------|-------|----------|-------------------|--------|-------------------------------|
| (266) a. | die   | <*>hele> | vele/weinige/twee | <hele> | appels                        |
|          | those | whole    | many/few/two      |        | apples                        |
| b.       | *het  | <hele>   | vele/weinige      | <hele> | lijden dat zij gedragen heeft |
|          | the   | whole    | much/little       |        | suffering that she borne has  |
- 
- |          |     |      |       |        |                   |        |              |
|----------|-----|------|-------|--------|-------------------|--------|--------------|
| (267) a. | *Ik | ken  | die   | <hele> | vele/weinige/twee | <hele> | mensen niet. |
|          | I   | know | those | whole  | many/few/two      |        | people not   |
| b.       | *Ik | ken  | die   | <hele> | ene               | <hele> | vent niet.   |
|          | I   | know | that  | whole  | one               |        | guy not      |

#### D. Personal pronouns and proper nouns

Like bare *heel*, inflectible *heel* is unable to combine with pronouns, regardless of whether it is placed to their left or their right; Example (268) only illustrates this for the former case. Apparent exceptions are cases like *mijn hele ik* 'my whole self' where the proper noun *ik* 'I' is used as a common noun.

(268) Inflectible *heel* and personal pronouns

|                        |           | SINGULAR                  | PLURAL                    |
|------------------------|-----------|---------------------------|---------------------------|
| 1 <sup>ST</sup> PERSON |           | * <i>hele ik/me/mij</i>   | * <i>hele wij/ons</i>     |
| 2 <sup>ND</sup> PERSON | REGULAR   | * <i>hele jij/je/jou</i>  | * <i>hele jullie</i>      |
|                        | POLITE    | * <i>hele u</i>           |                           |
| 3 <sup>RD</sup> PERSON | MASCULINE | * <i>hele hij/'m/hem</i>  | * <i>hele zij/hen/hun</i> |
|                        | FEMININE  | * <i>hele zij/'r/haar</i> |                           |
|                        | NEUTER    | * <i>hele het/'t</i>      |                           |

Generally speaking, inflectible *heel* cannot be combined with proper nouns either. However, when the proper noun is modified, as in (269a'), and can hence be preceded by a determiner, inflectible *heel* becomes possible. *Heel* as a negative polarity item contributing condescension on the part of the speaker, as in (269b'), is possible also; in that case the distal demonstrative *die* is also present.

- (269) a. \**hele Europa*  
           whole Europe  
       a'. *het (hele) Europa*   \*(van voor de Tweede Wereldoorlog)  
           the whole Europe   from before the Second World War  
       b. \**hele Jan*  
           whole Jan  
       b'. *Ik ken die hele Jan niet.*  
           I know that whole Jan not

Another exception involves proper nouns preceded by a definite determiner. Some examples are given in (270).

- (270) a. *Ik ben de hele Antillen doorgereisd.*  
           I am the whole Antilles traveled.through  
           'I have traveled through all the Antilles.'  
       b. *Ze hebben de hele Westertoren gerestaureerd.*  
           they have the complete Westertoren restored  
           'They have restored the complete Westertoren.'

7.2.2.3. *Heel/hele versus geheel/gehele*

We close this discussion of the noun phrase internal distribution of *heel/hele* with a note about its morphological form. While post-determiner *heel* often alternates with *geheel*, as seen in (271a), pre-determiner bare *heel* never alternates with *geheel* in the present-day vernacular; (271b) is unacceptable. (The *Woordenboek der Nederlandsche Taal* lists a variety of examples in which bare *geheel* linearly precedes the determiner, but these all sound archaic and/or awkward, and we will not include them here.)

- (271) a. *de hele/gehele wereld*  
           the whole world  
       b. *heel/\*geheel de wereld*  
           all the world

Of the four different readings we have discerned for post-determiner *heel* (cf. Section 7.2.1.2), only one is readily available for *geheel*; the phrase *de gehele taart* in (272) strongly prefers a totality reading for *gehele*, although a purely adjectival interpretation may be marginally available as well.

(272) A semantic comparison between post-determiner *heel* and *geheel*

|                   |                                | <i>de hele taart</i> | <i>de gehele taart</i> |
|-------------------|--------------------------------|----------------------|------------------------|
| adjectival        | cake that has no slice missing | +                    | ??                     |
| totality          | cake in its totality           | +                    | +                      |
| degree            | quite a cake                   | +                    | —                      |
| negative polarity | that (blasted) cake ... at all | +                    | —                      |

That *gehele* can sometimes have a purely adjective reading is clear from a fixed collocation like *gehele getallen* ‘numerals that are not fractions’. That we are dealing with purely adjectival *geheel* in this case is clear from the fact that *geheel* combines with the plural count noun *getallen*: just like quantificational *heel*, quantificational *geheel* normally cannot combine with plural count nouns.

In what follows we will illustrate the ban on degree and negative polarity readings for post-determiner *geheel* with reference to the types of examples used in our discussion of the semantics of post-determiner *heel* in Section 7.2.1.2. The discussion will show that the semantic contribution of *geheel* is mainly that of totality quantification; replacing *heel* by *geheel* in contexts where it does not have the core semantics of totality yields ungrammatical outputs.

For degree-*heel*, the difference with *geheel* can best be illustrated with reference to the triplet in (197), repeated here as (273) with *gehele* given as an alternant for *heel*. We see that only the third intonation contour, corresponding to the adjectival “complete/total” interpretation, is acceptable with *geheel*; the two other degree contours are impossible with *geheel*.

- (273) a. een hele/\*gehele verZA—meling [high degree]  
b. een HEle/\*geHEle verZAMeling [“quite” degree]  
c. een HEle/geHEle verzameling [adjectival: “complete”]

Accordingly, in examples of the type in (193), repeated as (274), *heel* does not alternate with *geheel*. Note that (274c) is marginally possible with *geheel* when it contributes totality quantification; the intended reading here is that of high degree.

- (274) a. Dat is een heel/\*geheel gedoe.  
that is a whole hassle  
b. Dat is een hele/\*gehele toer.  
that is a whole tour de force  
c. Ze maakten een hele/<sup>#</sup>gehele scène.  
they made a whole scene  
d. Dat was een hele/\*gehele opluchting.  
that was a whole relief  
‘That was quite a relief.’

The semantic difference between *een heel/hele N* and *een geheel/gehele N* can also be held responsible for the contrast in (275). The nouns immediately following *(ge)hele* in this example are used quantificationally, and not referentially; cf. Section 4.1.1. Since the nouns are quantificational, degree modification is possible, but because they are non-referential, they cannot be the target of “totality” quantification by *geheel/gehele*.

- (275) Er stond een hele/\*gehele hoop/stoet toeristen voor de deur.  
 there stood a whole heap/load [of] tourists in.front.of the door  
 ‘There were loads of tourists in front of the door.’

The (a)-examples in (276) show that degree-like readings of *hele* in the examples in (201) and (206) are also unavailable for *gehele*, and the (b)-examples show that the same thing holds for the negative polarity reading of *heel* in (207).

- (276) a. \*Jij bent al een gehele vent/heer/meid/dame/bink!  
 you are already a whole guy/gentleman/girl/lady/tough guy  
 a'. \*Hij is een gehele vent/kerel.  
 he is a whole guy/fellow  
 b. \*Ik had het gehele mens niet gezien.  
 I had the whole person not seen  
 b'. \*Ik was die gehele Bert Mulder allang weer vergeten.  
 I was that whole Bert Mulder already.long again forgotten

*Geheel* and *heel* are different not only with respect to their noun phrase internal distribution but also with respect to their external syntactic distribution. We will see this in the next section, in which the external behavior of the constituents containing *heel* and its alternants is discussed.

### 7.2.3. Distribution of noun phrases quantified by *heel* and its alternants

This section discusses the syntactic distribution of noun phrases containing one of the variants of *heel* examined in Section 7.2.2. For each of the uses of *heel* we will consider whether the relevant noun phrases occur as arguments (subject, direct object, indirect object, complement of a preposition), as predicates and/or as adjuncts.

#### 7.2.3.1. Distribution as arguments

In the discussion of the external syntactic distribution of *heel* phrases, a distinction must be made between the various semantic readings of *heel*. It turns out that *heel* phrases normally readily appear in all argument positions, although we will show that a special proviso is needed in the case of the negative polarity reading. *Heel* phrases, with the notable exception of negative polar *heel* ones, can normally also be used as predicates or adjuncts. The possibilities are given in the table in (277); the numbers refer to the examples to be discussed below. Negative polarity readings of pre- and post-determiner *heel* will be treated on a par in what follows, although the former is clearly preferred in this function, hence the distinction made in the final column in the table.

|                  | PRE-D <i>HEEL</i><br>(Q READING) | POST-D <i>HEEL</i> |          |          | <i>HEEL/HELE</i><br>(NPI) |
|------------------|----------------------------------|--------------------|----------|----------|---------------------------|
|                  |                                  | ADJECTIVAL         | TOTALITY | DEGREE   |                           |
| SUBJECT          | ✓ (278a)                         | ✓ (278b)           | ✓ (278c) | ✓ (278d) | ?/✓ (279c-e)              |
| DIRECT OBJECT    | ✓ (280a)                         | ✓ (280b)           | ✓ (280c) | ✓ (280d) | ?/✓ (280e)                |
| INDIRECT OBJECT  | ✓ (281a)                         | ✓ (281b)           | ✓ (281c) | ✓ (281d) | ?/✓ (281e)                |
| COMPLEMENT OF PP | ✓ (282a)                         | ✓ (282b)           | ✓ (282c) | ✓ (282d) | ? (282e)                  |
| PREDICATE        | ✓ (283a)                         | ✓ (283b)           | ✓ (283c) | ✓ (283d) | * (283e)                  |
| ADJUNCT          | ✓ (284a)                         | ✓ (285a)           | ✓ (284b) | ✓ (284c) | * (288)                   |

Example (278a) shows that the core reading of bare *heel* phrases (“exhaustive partitioning of structured units”) is readily available in subject position. The adjectival, totality and degree readings of post-determiner inflectible *heel* are also readily available for *heel* phrases in subject position.

- (278) a. Heel de appel zit vol wormen. [Q reading]  
all the apple sits full [of] worms  
'The entire apple is full of worms.'
- b. Een hele appel is beter dan een halve. [adjectival reading]  
a whole apple is better than a half  
'A whole apple is better than a half one.'
- c. De hele appel zit vol wormen. [totality reading]  
the whole apple sits full [of] worms  
'The entire apple is full of worms.'
- d. Er lag een hele berg appels op de tafel. [degree reading]  
there lay a whole mountain [of] apples on the table  
'There was quite a pile of apples lying on the table.'

The availability of the negative polarity interpretation depends on the type of verb involved. When the verb is intransitive or transitive, that is, when the phrase with *heel* is an underlying subject, this reading is not available, as is shown by (279a&b). However, when we are dealing with a passive or an unaccusative verb, that is when we are dealing with a °DO-subject, as in (279c-e), the negative polarity interpretation is readily possible; see also the discussion in Section 7.2.1.2.2, sub III. The question mark preceding pre-determiner bare *heel* is to indicate that it is less preferred on the negative polarity reading than post-determiner inflectible *heel*.

- (279) a. \*Heel die/Die hele vent werkt niet.  
all that/that whole guy works not  
b. \*Heel die/Die hele vent heeft dat boek niet gelezen.  
all that/that whole guy has that book not read  
c. Dat hele/?Heel dat artikel is door iedereen al vergeten.  
that whole/all that article is by everyone already forgotten  
d. Dat hele/?Heel dat artikel was toen nog niet verschenen.  
that whole/all that article was then yet not appeared  
e. Dat hele/?Heel dat toneelstuk kan me echt niet bekoren.  
that whole/all that play can me really not please

We will see in the following subsection that DO-subjects behave just like objects. This means that, in technical terms, the contrast between (279a&b) and (279c-e) can be accounted for by assuming that the negative polarity item *heel* must be °c-commanded by its licenser (the negation) at some stage in the derivation.

## II. Direct and indirect object

For direct and indirect objects, grammatical examples can be constructed for all the various uses of *heel*. This is illustrated for direct objects in (280). The question mark preceding pre-determiner bare *heel* in (280) again indicates that the example with post-determiner inflectible *heel* is preferred on the negative polarity reading.

- (280) a. Ik heb heel de appel opgegeten. [Q reading]  
 I have all the apple prt.-eaten  
 'I ate up the entire apple.'
- b. Ik wil graag een hele appel. [adjectival reading]  
 I want please a whole apple  
 'I would like to have a whole apple, please.'
- c. Ik heb de hele appel opgegeten. [totality reading]  
 I have the whole apple prt.-eaten  
 'I ate the entire apple up.'
- d. Ik heb een hele berg appels gegeten. [degree reading]  
 I have a whole mountain [of] apples eaten  
 'I ate a whole pile of apples.'
- e. Ik ken die hele/<sup>?</sup>heel die vent niet. [NPI]  
 I know that whole/all that guy not  
 'I don't know that guy at all.'

The examples in (281) give comparable sentences with *heel* phrases functioning as indirect objects. Example (281a), which was given earlier as (166a), should be seen in the light of the discussion of the role of distributivity in Section 7.2.1.1; see also the discussion of the contrast between the examples in (167a) and (188a).

- (281) a. Ik heb heel het huis een opknapbeurt gegeven. [Q reading]  
 I have all the house a cleaning given  
 'I gave the entire house a cleaning.'
- b. Ik geef een hele appel de voorkeur boven een halve. [adjectival reading]  
 I give a whole apple the preference over a half  
 'I prefer a whole apple to a half one.'
- c. Ik heb het hele huis een opknapbeurt gegeven. [totality reading]  
 I have the whole house a cleaning given  
 'I gave the entire house a cleaning.'
- d. Ik heb hele horden mensen een hand gegeven. [degree reading]  
 I have whole hordes [of] people a hand given  
 'I shook hands with immense hordes of people.'
- e. Ik zou die hele/<sup>?</sup>heel die vent niet eens een hand willen geven. [NPI]  
 I would that whole/all that guy not even a hand want give  
 'I wouldn't even want to shake hands with that guy.'

*III. Complement of preposition*

For the complement of a preposition, grammatical examples can again readily be constructed for all the various uses of *heel*. The negative polarity reading in (282e) is less felicitous than those in (280e) and (281e), but this might be a more general property of (some) Dutch negative polarity items. Example (282a), given earlier as (166b), again ties in with the discussion of the role of distributivity in Section 7.2.1.1; see also the discussion of the contrast between the examples in (167b) and (188b).

- (282) a. We kijken naar heel de mens. [Q reading]  
           we look at all the person  
           'I took a view of the entire person.'
- b. Ik geef aan een hele appel de voorkeur. [adjectival reading]  
           I give to a whole apple the preference  
           'I prefer a whole apple.'
- c. Holistische geneeskunde kijkt naar de hele mens. [totality reading]  
           holistic healing looks at the whole person
- d. Ik heb met hele horden mensen staan praten. [degree reading]  
           I have with whole hordes [of] people stand talk  
           'I stood talking to whole hordes of people.'
- e. ?Ik zou met die hele/heel die vent nog geen seconde willen praten. [NPI]  
           I would with that whole/all that guy PRT no second want talk  
           'I wouldn't even want to talk to that guy for a second.'

*7.2.3.2. Distribution as predicates*

The examples in (283) show that all *heel* phrases can be used as nominal predicates except for those involving *heel* used as a negative polarity item contributing condescension.

- (283) a. Wij zijn samen heel de vakgroep. [Q reading]  
           we are together all the department
- b. Deze appel is een hele appel. [adjectival reading]  
           this apple is a whole apple
- c. Wij zijn samen de hele vakgroep. [totality reading]  
           we are together the whole department
- d. Wij zijn samen een hele horde mensen. [degree reading]  
           we are together a whole horde [of] people
- e. \*Hij is toch niet heel die/die hele vent van hiernaast, hè? [NPI]  
           he is PRT not all that/that whole guy of next.door TAG

The ungrammaticality of (283e) is entirely due to the presence of *heel/hele*; without it, the sentence is perfect. Since the problem with this example is clearly not due to the lack of a c-commanding licenser (which was the case with the subject cases in 279a&b), we must find some other reason for the unacceptability of (283e). One option that comes to mind is that this is due to the fact that predicates normally provide new information, so the *heel*-phrase does not satisfy the D-linking requirement imposed on the negative polarity reading, which was discussed in Section 7.2.1.2.2, sub III.

### 7.2.3.3. Distribution as adjuncts

Both pre-determiner bare *heel* and post-determiner inflectible *heel* show up in noun phrases that function as adverbial phrases. In (284a&b), *heel* and *hele* contribute their core quantificational semantics of exhaustivity/totality. In (284c), by contrast, the semantics of *hele* is that of (very) high degree; she was crying for a very long time. This difference between (284a&b) and (284c) is confirmed by the different intonation patterns they exhibit; cf. the discussion in Section 7.2.1.2.2.

- (284) a. Heel de dag/tijd zat ze te huilen. a'.[HEEL de dag]/\*[heel de DAG]  
 all the day/time sat she to cry  
 b. De hele dag/tijd zat ze te huilen. b'.[de HEle dag]/\*[de hele DAG]  
 the whole day/time sat she to cry  
 'She was crying all day/all the time.'  
 c. Hele dagen zat ze te huilen. c'.[hele DAGen]/\*[HEle dagen]  
 whole days sat she to cry  
 'She was crying for days.'

The unacceptable intonation pattern of (284c) is not categorically impossible for *hele dagen*, however. The minimal pair in (285a&b) is illustrative in this connection. While in the (a)-example the adjunct *hele dagen* specifies the extent of the entire duration of her working on her dissertation, in the (b)-example *hele dagen* says that she worked on her dissertation for an unspecified number of whole days (that is, it specifies the amount of time *per day* that she worked on her dissertation). In its stressed form *hele* is adjectival, as is clear from the fact that *hele dagen* alternates with *halve dagen*, as is shown in (285c).

- (285) a. Ze werkte hele DAGen aan haar proefschrift.  
 she worked whole days on her dissertation  
 'She was working on her dissertation for days (at a stretch).'
- b. Ze werkte HEle dagen aan haar proefschrift.  
 she worked whole days on her dissertation  
 'She worked full-time (whole days) on her dissertation.'
- c. Ik werk HEle dagen, maar hij werkt HALve dagen.  
 I work whole days but he works half days  
 'I work full-time, but he works part-time.'

In (284a&b), the adjunct reading of the *heel* phrases is available for both pre- and post-determiner *heel*. In these examples, the syntax of the overall construction makes adjunct construal the only possibility for the *heel* phrases. In examples of the type in (286), however, the noun phrase following the verb in principle has two construal possibilities; it can be interpreted either as the object of the verb, in which case the verb *fluiten* means "to play the flute", or as an adjunct, in which case *fluiten* means "whistle"; see Section 8.3 for more discussion. It may be the case that adjunct construal is not equally felicitous in the two examples in (286); some (but not all) speakers find that the object reading is strongly preferred in the case of (286a), while (286b) is ambiguous. This suggests that, at least for a subset of speakers, the adverbial reading of *heel* phrases with pre-determiner bare *heel* is restricted.



- (286) a. Ze flook heel het concert.  
           she whistled/played the flute all the concert  
       b. Ze flook het hele concert.  
           she whistled/played the flute the whole concert

The discussion above has focused on the construal of *heel* phrases as temporal adverbial phrases. This is indeed by far the most frequent way in which *heel* phrases are used as adjuncts; the examples in (287) show that even *heel* phrases headed by a noun that can otherwise be used as a measure phrase for distance can receive a temporal interpretation.

- (287) a. Zij zat heel de afstand van Amsterdam naar Tilburg te fluiten.  
           she sat all the distance from Amsterdam to Tilburg to whistle  
       b. Zij zat de hele afstand van Amsterdam naar Tilburg te fluiten.  
           she sat the whole distance from Amsterdam to Tilburg to whistle  
           ‘All the way from Amsterdam to Tilburg she was whistling.’

So far we have seen that in adjuncts *heel* can receive a core quantificational interpretation, a degree interpretation and a reading which is presumably to be classified as adjectival (the “full-time” interpretation of *hele dagen* illustrated in (285b&c)). What is impossible is for *heel* to be interpreted as a negative polarity item contributing condescension; while example (288) is certainly grammatical, both with and without *heel/hele*, the negative polarity interpretation is not available; the reading assigned to *heel/hele* is the core interpretation of exhaustivity/totality.

- (288) Ik werkte (heel) die/die (hele) dag niet eens!  
           I worked all that/that whole day not even  
           ‘I didn’t even work that day!’

#### 7.2.4. *Distribution of heel and its alternants as independent constituents*

This section discusses the syntactic distribution of the various forms of *heel* examined in Section 7.2.2 as independent syntactic constituents (arguments, predicates and adjuncts), as well as their use as so-called °floating quantifiers.

##### 7.2.4.1. *Distribution as arguments*

This section briefly discusses the use of pre-determiner bare *heel*, post-determiner inflectible *heel* and *geheel* as independent arguments. The conclusion we may draw from the discussion below is that the possibilities for independent uses of these elements are quite limited.

##### 1. *Bare heel*

The bare form *heel* does not readily occur in argument position. Examples of the type in (289a), where *een heel* is a noun phrase denoting a whole loaf of bread, do occur, but it is doubtful that *heel* functions as an argument here; *een heel* is optionally accompanied by *wit/volkoren*, which can function as nouns themselves, so that when *een heel* occurs on its own, one may assume there to be a null noun present in the structure. Note that the bare form *half* occurs in the same syntactic

context; it can also be affixed with the diminutive suffix *-je* here (which would be awkward for *heel*: \**een heeltje* (*wit*)).

- (289) a. Ik wil graag een heel (wit/volkoren).  
 I want please a whole white/whole-wheat  
 'I would like to have one loaf of (white/whole-wheat) bread, please.'
- b. Ik wil graag een half/halfje (wit/volkoren).  
 I want please a half/half<sub>dim</sub> white/whole-wheat  
 'I would like to have half a loaf of white/whole-wheat bread, please.'

## II. Inflected hele

The schwa-inflected form *hele* sporadically shows up in argument positions, as in (290), but for such cases, it can again plausibly be argued that there is a null noun in the noun phrase containing *hele*.

- (290) a. Dit is een hele, en dat is een halve.  
 this is a whole and that is a half
- b. Hij speelde de bal over de hele.  
 he played the ball over the whole  
 'He played a passing shot which crossed the full width of the soccer field.'

## III. Geheel

The variant of *heel* prefixed with *ge-* also shows up independently in noun phrases, in which case it arguably functions as the head of the noun phrase. Examples are given in (291). That *geheel* is a noun is especially clear from (291a), taken from the internet, where it is contrasted with the noun *delen* 'parts'.

- (291) Wat is de relatie tussen het geheel/\*heel en zijn delen?  
 what is the relation between the whole/whole and its parts  
 'the whole and its parts'

In clause-adverbs like *in z'n geheel* in (292a), *geheel* only shows up in possessed noun phrases; *z'n* 'its' does not alternate with *het*. By contrast, when the PP in question functions as an adverbial 'intensifier of negation, as in (292b&c), it is only *het* that is possible. The distribution of *z'n* and *het* seems to correlate with the fact that *in z'n geheel* always has an antecedent in the clause (the noun phrases *het huis* in (292a)), while *in het geheel* does not.

- (292) a. Ik heb het huis in z'n geheel een opknappbeurt gegeven.  
 I have the house in its whole a cleaning given  
 'I gave the house in its entirety a cleaning.'
- b. Dat heb ik [in het geheel niet] gezegd.  
 that have I in the whole not said  
 'I didn't say that at all/I didn't say any such thing.'
- c. Ik heb [in het geheel geen] vertrouwen in hem.  
 I have in the whole no trust in him  
 'I don't trust him at all.'

7.2.4.2. *Distribution as predicates*

As already pointed out in the discussion of the semantics of *heel*, purely adjectival *heel* occurs as a predicate; in example (293a) *heel* functions as the predicate of a copular construction, and in (293b) as a °suppletive. In contexts like these, *heel* does not alternate with *hele* or *geheel*.

- (293) a. Die vaas is gebroken, maar deze is nog heel.  
           that vase is broken but this.one is still whole  
           ‘That vase is broken but this one is still unscathed.’  
       b. De archeoloog had de vaas graag heel gevonden.  
           the archeologist would.have the vase PRT whole found  
           ‘The archeologist would have liked to have found the vase in an unbroken state.’

7.2.4.3. *Distribution as adjuncts and floating quantifiers*

One respect in which *heel* and *hele* differ robustly from *geheel* is the fact that *heel/hele* cannot be construed as a floating quantifier at all. That is, sentences of the type in (294a) are entirely impossible. The grammaticality of (294b), on the other hand, may seem to suggest that *geheel* can be a floating quantifier, but claims to this effect are immediately refuted by the fact that *geheel* (in contradistinction to *heel/hele*) cannot be construed with noun phrases; cf. \**geheel dat boek* ‘whole that book’. Rather than functioning as a floating quantifier, *geheel* in (294b) is an adjunct, replaceable with the PP *in z’n geheel* (discussed at the end of Section 7.2.4.1) or the adverb *helemaal*. From (294b) we conclude, then, that *geheel* can occur on its own as an adjunct, and differs in this regard from *heel* and *hele*.

- (294) a. \*Ik heb dat boek gisteren heel/hele gelezen.  
           I have that book yesterday all/whole read  
       b. Ik heb dat boek gisteren geheel gelezen.  
           I have that book yesterday whole read  
       b’. Ik heb dat boek gisteren in z’n geheel/helemaal gelezen.  
           I have that book yesterday in its whole/altogether read

The form *geheel* and the adverb *helemaal* also show up in a number of other adverbial contexts of a highly idiomatic character. Some examples are given in (295). It is difficult to tell whether *geheel/helemaal* in (295) are constituents of the noun phrases/PPs with which they combine, or whether they are constituents of the VP or clause in which these expressions occur; the examples in (296) show that topicalizing the noun phrase/PP and pied piping *geheel/helemaal* is not very felicitous, although stranding *geheel/helemaal* under topicalization is appreciably worse.

- (295) a. Ik ben geheel/helemaal/\*heel de Uwe.  
           I am whole/altogether/whole the yours  
           ‘I am entirely/all yours.’  
       b. Ik ben geheel/helemaal/\*heel in de war.  
           I am whole/altogether/whole confused  
           ‘I am entirely completely confused.’

- (296) a. <sup>??</sup>Geheel/Helemaal in de war bleek hij te zijn.  
           whole/altogether the sucker turned.out he to be  
       b. \*In de war bleek hij geheel/helemaal te zijn.  
           the sucker turned.out he whole/altogether to be

To conclude this discussion of adverbially construed *heel* forms, we return to an observation made in the discussion of the semantics of *heel* in Section 7.2.1. We observed there that adnominal *heel* sometimes seems to quantify a constituent larger than the noun phrase that it is syntactically construed with, and contributes a semantics which is essentially the same as that of adverbial *helemaal*. Examples of the type in (297) illustrate this. The interpretation of *helemaal* in (297c) is that of a VP-level adverb; the semantic contribution of *heel* and *hele* in (297a&b) seems to be completely on a par with that of *helemaal*.

- (297) a. Heel de tafel zit onder de vlekken.  
           all the table sits under the stains  
           ‘The whole table is stained.’  
       b. De hele tafel zit onder de vlekken.  
           the whole table sits under the stains  
           ‘The whole table is stained.’  
       c. De tafel zit helemaal onder de vlekken.  
           the table sits altogether under the stains  
           ‘The table is profusely covered with stains.’

In (298c), on the other hand, *helemaal* is not interpreted as a VP-level adverb but as a modifier of *in de hoek* ‘in the corner’; *helemaal in de hoek* can be translated as *all the way in the corner*. Correlated with the fact that *helemaal* is a PP-modifier rather than a VP-level adverb is the fact that (298c) has no counterparts with adnominal *heel/hele*: the examples in (298a&b) are entirely unacceptable.

- (298) a. \*Heel de tafel staat in de hoek.  
           all the table stands in the corner  
       b. \*De hele tafel staat in de hoek.  
           the whole table stands in the corner  
       c. De tafel staat helemaal in de hoek.  
           the table stands altogether in the corner  
           ‘The table is standing all the way in the corner.’

That *helemaal* and adnominal *heel/hele* cannot always be used interchangeably can also be shown in the other direction by means of the examples in (299).

- (299) a. Heel de stad ontwaakte.  
           all the town woke.up  
       b. De hele stad ontwaakte.  
           the whole town woke.up  
       c. \*De stad ontwaakte helemaal.  
           the town woke.up altogether

For completeness' sake note that we analyzed *helemaal* as a VP-modifier, while *allemaal* has been analyzed in Section 7.1.5 as a floating quantifier (with °scope over the antecedent noun phrase only). There are a number of syntactic and semantic differences between these two elements that justify this difference in analysis. First of all, *allemaal* can only be used with a plural antecedent, whereas *helemaal* can be used with both plural and singular count-nouns, as illustrated in example (300).

- (300) a. Ik heb de boeken/\*het boek allemaal gelezen.  
           I have the books/the book all read  
       b. Ik heb de boeken/het boek helemaal gelezen.  
           I have the books/the book completely read

Second, *helemaal* readily combines with substance nouns, whereas *allemaal* seems to give rise to a degraded result in such constructions (although judgments differ; Haeseryn et al. (1997: 350) give (301a) with *allemaal* as fully acceptable).

- (301) a. De alcohol was helemaal/?allemaal verdampt.  
           the alcohol was completely/all evaporated  
           'The alcohol had completely/all evaporated.'  
       b. De boter was helemaal/?allemaal gesmolten.  
           the butter was completely/all melted

These differences can, of course, easily be accounted for: if *helemaal* has scope over the entire VP, it is unlikely to impose constraints on any noun phrase within that VP, while *allemaal* obviously does impose constraints on its antecedent. We may therefore conclude that *helemaal* and *allemaal* differ both in scope and in meaning. This conclusion leads to the expectation that it should be possible for the two elements to occur in one and the same construction. As shown in example (302a) this expectation is indeed borne out. Note, finally, that the two quantifiers cannot appear in the order given in example (302b), which suggests that *helemaal* does indeed have scope over the entire VP.

- (302) a. Ik heb de boeken allemaal helemaal gelezen.  
           I have the books all completely read  
       b. \*Ik heb de boeken helemaal allemaal gelezen.

### 7.3. A note on focus particles

In the previous sections we have discussed the pre-determiners *al* and *heel* and their alternants. However, this does not exhaust the possibilities; the examples in (303) show that focus particles like *zelfs* 'even', *ook* 'also' and *alleen* 'only' and may also precede the determiner. That the focus particle and the noun phrase form a constituent is strongly suggested by the fact that they occur in clause-initial position; cf. the °constituency test.

- (303) a. Zelfs de BUURman heb ik niets verteld.  
           even the neighbor have I nothing told  
           'Even the neighbor, I didn't tell anything.'

- b. Ook de BUURman vindt dat het huis geschilderd moet worden.  
also the neighbor finds that the house painted must be  
'The neighbor is also of the opinion that the house must be painted.'
- c. Alleen de BUURman heb ik nog niets verteld.  
only the neighbor have I yet nothing told  
'Only the neighbor I have told nothing yet.'

The examples in (304), on the other hand, show that at least some of the focus particles need not be part of the noun phrase but can also be used independently in the clause.

- (304) a. De BUURman heb ik zelfs niets verteld.  
the neighbor have I even nothing told  
'I didn't even tell the neighbor anything.'
- b. De BUURman vindt ook dat het huis geschilderd moet worden.  
the neighbor finds also that the house painted must be  
'The neighbor is also of the opinion that the house must be painted.'
- c. ?De BUURman heb ik alleen nog niets verteld.  
the neighbor have I only yet nothing told

Despite the fact that the examples in (303) and (304) resemble the behavior of *al* and *heel* and their alternants in various respects, we will not discuss the behavior of these focus particles here. The reason for this is that the focus particles may also combine with other types of phrases. The examples in (305) illustrate this for PPs.

- (305) a. Zelfs/Ook met de BUURman heb ik nog niet gesproken.  
even/also with the neighbor have I not yet spoken  
'Even/Also with the neighbor, I haven't spoken yet.'
- b. Met de buurman heb ik zelfs/ook nog niet gesproken.  
with the neighbor have I even/also yet not spoken  
'With the neighbor, I haven't even/also spoken yet.'

We therefore postpone the discussion of these focus elements to some other occasion, where we can give a more comprehensive discussion of them; for the moment, we refer the reader to Barbiers (1995), and references cited there, for relevant discussion.

#### 7.4. Bibliographical notes

Although we have already referred to most studies on pre-determiner *al* and *heel* and their variants during our discussion, we want to highlight some of the more important ones here: apart from grammars like Paardekooper (1986) and Haeseryn et al. (1997) and the *Woordenboek der Nederlandsche Taal*, interesting discussions can be found in Verkuyt (1981), De Jong (1991), Coppens (1991), Zwarts (1992), Perridon (1997), Den Dikken (2002) and Hoeksema (2007).



## Chapter 8

### Syntactic uses of noun phrases

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## Introduction

This chapter will discuss the distribution of noun phrases within the clause, and the differences between the types of noun phrase in this respect: pronouns, for example, behave differently from definite noun phrases, which in their turn behave differently from indefinite noun phrases. Sections 8.1 and 8.2 discuss the distribution of noun phrases in their core functions as °arguments and predicates, respectively. Section 8.3 concludes the discussion with some remarks on the adverbial use of noun phrases. This chapter will be relatively short given that some of the issues discussed here are discussed in more detail elsewhere. For example, the use of noun phrases as arguments of nouns is extensively discussed in Chapter 2, and similar chapters can be found in Broekhuis & Corver (in prep).

## 8.1. Noun phrases as arguments

Noun phrases are typically used as arguments of a verb or one of the three other major categories N, A and P. This section mainly focuses on their distribution as arguments of the verb, that is, in the clausal domain. In Section 8.1.1, we start with a discussion of the argument functions the noun phrase can have. This is followed in 8.1.2 by a discussion of the restrictions on *wh*-movement and topicalization. Section 8.1.3 provides a discussion of °scrambling, that is, the placement of the noun phrase in the °middle field of the clause. In 8.1.4, we conclude with a discussion of the restrictions on noun phrases in the °expletive construction.

### 8.1.1. Syntactic functions of noun phrases

Noun phrases can occur in all argument functions. Some typical examples are given in (1) to (4). In (1) the noun phrase acts as the (nominative) subject of the clause, in (2) as the (accusative) direct object, in (3) as the (dative) indirect object, and in (4), finally, as the °complement of a preposition: the primeless examples in (4) involve a prepositional indirect object and the primed ones involve PP-complements of the verb, but examples could also be given for PPs with, e.g., an adverbial function. The (a)- and (b)-examples of each set illustrate, respectively, non-neuter and neuter singulars, and the (c)-examples exemplify plurals. For each of these types a definite and an indefinite example are given. The definite noun phrases are headed by the definite article *de/het* ‘the’, but they can be replaced by any other type of definite noun phrase: replacing the noun phrase *de man* ‘the man’ by, e.g., noun phrases like *die man* ‘that man’ or *mijn vriend* ‘my friend’, a personal pronoun like *hij/hem* ‘he/him’ or the universal quantifier *iedereen* ‘everyone’ does not affect the grammaticality judgments. Neither will the grammaticality judgments change when we replace the indefinite singular noun phrase *een man/kind* by the existential quantifier *iemand* or the indefinite plural DP [ $\emptyset$  *mensen*] ‘persons’ by some other plural indefinite noun phrase like *verschillende/veel/vier mensen* ‘several/many/four persons’.

- (1)     • Subject
- |                                                       |                                                                            |
|-------------------------------------------------------|----------------------------------------------------------------------------|
| a. De man was afwezig.<br>the man was absent          | a'. Er was een man afwezig.<br>there was a man absent                      |
| b. Het kind was afwezig.<br>the child was absent      | b'. Er was een kind afwezig.<br>there was a child absent                   |
| c. De mensen waren afwezig.<br>the people were absent | c'. Er waren [ <sub>DP</sub> Ø mensen] afwezig.<br>there was people absent |
- (2)     • Direct object
- |                                                     |
|-----------------------------------------------------|
| a. Hij genas de/een man.<br>he healed the/a man     |
| b. Hij genas het/een kind.<br>he healed the/a child |
| c. Hij genas de/Ø mensen.<br>he healed the/Ø people |
- (3)     • Indirect object
- |                                                                      |
|----------------------------------------------------------------------|
| a. Hij gaf de/een man nieuwe hoop.<br>he gave the/a man new hope     |
| b. Hij gaf het/een kind nieuwe hoop.<br>he gave the/a child new hope |
| c. Hij gaf de/Ø mensen nieuwe hoop.<br>he gave the/Ø people new hope |
- (4)     • Complement of PP
- |                                                                          |                                                              |
|--------------------------------------------------------------------------|--------------------------------------------------------------|
| a. Hij gaf het boek aan de/een man.<br>he gave the book to the/a man     | a'. Jan wacht op de/een man.<br>Jan waits for the/a man      |
| b. Hij gaf het boek aan het/een kind.<br>he gave the book to the/a child | b'. Jan wacht op het/een kind.<br>Jan waits for the/a child  |
| c. Hij gaf boeken aan de/?Ø mensen.<br>he gave books to the/Ø people     | c'. Jan wacht op de/?Ø mensen.<br>Jan waits for the/Ø people |

In the examples above, two things leap to the eye. First, it can be observed that the plural indefinite noun phrases in the (c)-examples in (4) give rise to a marked result. This is related to the fact that the indefinite noun phrase has a nonspecific reading; when the plural noun phrase has a generic reading, as in (5), the result is fine.

- (5) a. Jan geeft graag aan goede doelen.  
Jan gives gladly to good causes  
'Jan likes to give to charity.'
- b. Jan houdt van zebra's.  
Jan is fond of zebras  
'Jan loves zebras.'

Second, it can be noted that the indefinite subjects in the primed examples in (1) normally occur in an expletive construction. This also has to do with the fact that the indefinite noun phrase is construed non-generically. We will come back to this in Section 8.1.4 below.

8.1.2. *Noun phrases in clause-initial position*

This section is confined to *wh*-movement and topicalization of noun phrases, and discusses some restrictions on these operations that are related to the type of noun phrase moved. But first consider the examples in (6). These examples show that topicalization may only target the initial position of the main clause, whereas *wh*-movement may target the initial position of both main and embedded clauses. Note that when the initial position of an embedded clause is filled by a *wh*-phrase, the interrogative complementizer *of* ‘whether’ can but need not be overtly realized.

- (6) a. Wat<sub>i</sub> heeft Jan met plezier t<sub>i</sub> gelezen?  
       what has Jan with pleasure read  
     a'. Dat boek<sub>i</sub> heeft Jan met plezier t<sub>i</sub> gelezen.  
        that book has Jan with pleasure read  
     b. Ik weet niet [wat<sub>i</sub> (of) Jan met plezier t<sub>i</sub> gelezen heeft].  
        I know not what COMP Jan with pleasure read has  
     b'. \*Ik denk [dat boek<sub>i</sub> (dat) Jan met plezier t<sub>i</sub> gelezen heeft].  
        I think that book that Jan with pleasure read has

Realizing *of* in embedded questions is often stigmatized as being substandard, and is not often found in writing; cf. <http://taaladvies.net/taal/advies/vraag/592/> for more discussion. In some Southern dialects *dat* is used instead of *of*. For some speakers it is even possible to realize both: *Jan vroeg [wie of dat hij bezocht had]* ‘Jan asked who he had visited’. See, e.g., De Rooij (1965) and Hoekstra & Zwart (1994) for more details.

8.1.2.1. *Wh-movement*

Noun phrases can only be *wh*-moved when they are interrogative. This means that the noun phrase must be an interrogative personal pronoun like *wie* or *wat*, or be explicitly marked as being interrogative by having an interrogative determiner or quantificational modifier. Some typical cases are given in (7). This section will discuss a number of additional restrictions on *wh*-movement of noun phrases.

- (7) a. Wie<sub>i</sub>/Wat<sub>i</sub> heeft hij t<sub>i</sub> meegenomen? [personal pronoun]  
       who/what has he prt.-brought  
       ‘Who/what did he bring with him?’  
     b. [Wiens boek]<sub>i</sub> heeft hij t<sub>i</sub> gestolen? [possessive pronoun]  
        whose book has he stolen  
        ‘Whose book did he steal?’  
     c. [Welk/Wat voor een boek]<sub>i</sub> heeft hij t<sub>i</sub> gelezen? [demonstrative pronoun]  
        which/what for a book has he read  
        ‘Which/What kind of book did he read?’  
     d. [Hoeveel boeken]<sub>i</sub> heeft hij t<sub>i</sub> gelezen? [quantifier/numeral]  
        how.many books has he read  
        ‘How many books did he read?’

### *I. Wh-movement is obligatory*

It is generally claimed that movement of interrogative noun phrases is obligatory; when the movement does not apply, the interrogative meaning is normally lost. The examples in (8), for example, are not true questions but receive an echo interpretation: sentences like these, in which the question word is heavily stressed, are used when the speaker did not properly hear what the addressee just said, to express astonishment on the part of the speaker about what he has just heard, or in teacher-pupil interaction as test questions.

- (8) a. Hij heeft WIE/WAT meegenomen?  
       he has who/what prt.-brought  
       b. <sup>(?)</sup>Hij heeft WELK boek gelezen?  
           he has which book read  
           ‘Which book did he read?’  
       b’. <sup>?</sup>Hij heeft WAT voor een boek gelezen?  
           he has what for a book read  
       c. Hij heeft WIENS boek gestolen?  
           he has whose book stolen  
       d. Hij heeft HOVEEL boeken gelezen?  
           he has how.many books read

Still, we have observed from our own language behavior that strings like those given in (8) are occasionally also used as “true” questions when given a more interrogative intonation pattern (with a fall in pitch after the question word). Since we do not know of any independent studies that indicate that this use is more generally found, we leave this as an issue for future research, while stating that using examples without *wh*-movement as true *wh*-questions is certainly the exception rather than the rule.

### *II. Superiority effects in multiple questions*

A clear and systematic exception to the general rule that a *wh*-phrase must be moved into clause-initial position can be found in so-called multiple questions that contain more than one *wh*-phrase. In this case, the requirement that a *wh*-phrase be moved is overruled by the fact that only a single constituent can be placed into clause-initial position. Generally speaking, it is the *wh*-phrase that is superior ( $\approx$  closest to the target position) that is moved. The effects of this so-called °superiority condition can be observed most clearly in embedded clauses like (9). Example (9a) shows that, when both the subject and the direct object are *wh*-phrases, it is the subject that occupies the clause-initial position; moving the object instead, as in (9a’), gives rise to a severely degraded result. Example (9b) shows that to a slightly lesser degree the same contrast holds for examples where both the direct and (bare) indirect object are questioned; it is clearly preferred that the indirect object undergoes *wh*-movement, not the direct object. Example (9c), finally, shows that when the indirect object is periphrastic, it is the direct object that preferably undergoes movement.

- (9) a. Ik vroeg [[welke jongen]<sub>i</sub> t<sub>i</sub> welk boek gelezen had].  
       I asked which boy which book read had  
       a'. \*Ik vroeg [[welk boek]<sub>i</sub> welke jongen t<sub>i</sub> gelezen had].  
       b. Ik vroeg [[welke jongen]<sub>i</sub> hij t<sub>i</sub> welk boek aangeboden had].  
       I asked which boy he which book prt.-offered had  
       b'. ?Ik vroeg [[welk boek]<sub>i</sub> hij welke jongen t<sub>i</sub> aangeboden had].  
       c. Ik vroeg [[welk boek]<sub>i</sub> hij t<sub>i</sub> aan welke jongen aangeboden had].  
       I asked which book he to which boy prt.-offered had  
       c'. ?Ik vroeg [[aan welke jongen]<sub>i</sub> hij welk boek t<sub>i</sub> aangeboden had].

The gradual increase in acceptability of the primed examples in (9) is probably related to the fact that the order of the subject and direct object is really fixed in Dutch, whereas it is not entirely impossible to have an accusative DP preceding a dative one, and it is certainly not uncommon to have a periphrastic indirect object preceding the direct object.

Judgments are less clear in the case of main clauses. As expected, all speakers agree that the primeless examples in (10) are preferred to the primed ones, but many speakers find that the latter are much better than the primed ones in (9). So far, it is not clear what causes the contrast between the primed examples in (9) and (10).

- (10) a. [Welke jongen]<sub>i</sub> heeft t<sub>i</sub> [welk boek] gelezen?  
       which boy has which book read  
       a'. % [Welk boek]<sub>i</sub> heeft [welke jongen] t<sub>i</sub> gelezen?  
       b. [Welke jongen]<sub>i</sub> heeft hij t<sub>i</sub> [welk boek] aangeboden?  
       which boy has he which book prt.-offered  
       b'. % [Welk boek]<sub>i</sub> heeft hij [welke jongen] t<sub>i</sub> aangeboden?  
       c. [Welk boek]<sub>i</sub> heeft hij t<sub>i</sub> aan [welke jongen] aangeboden?  
       which book has he to which boy prt.-offered  
       c'. ? [Aan welke jongen]<sub>i</sub> heeft hij [welk boek] t<sub>i</sub> aangeboden?

It seems that the *wh*-phrases in the primed examples in (10) must be of the same sort in order to be able to violate the superiority condition; as soon as one of the two DPs headed by a demonstrative is replaced by an interrogative personal pronoun, the results seem to get worse. Again, it is not clear what causes this effect.

- (11) a. \*?<sub>i</sub> [Welk boek]<sub>i</sub> heeft [wie] t<sub>i</sub> gelezen?  
       a'. \*?<sub>i</sub> [Wat]<sub>i</sub> heeft [welke jongen] t<sub>i</sub> gelezen?  
       b. \*?<sub>i</sub> [Welk boek]<sub>i</sub> heeft hij [wie] t<sub>i</sub> aangeboden?  
       b'. \*?<sub>i</sub> [Wat]<sub>i</sub> heeft hij [welke jongen] t<sub>i</sub> aangeboden?  
       c. ?<sub>i</sub> [Aan welke jongen]<sub>i</sub> heeft hij [wat] t<sub>i</sub> aangeboden?  
       c'. ?<sub>i</sub> [Aan wie]<sub>i</sub> heeft hij [welk boek] t<sub>i</sub> aangeboden?

### III. Long *wh*-movement and subject-object asymmetries

*Wh*-movement need not target the initial position of the minimal clause containing the moved argument, but may also trigger the initial position of some higher clause. In order for this to be possible the clause containing the *wh*-phrase must be the complement of a limited set of so-called bridge verbs, generally a verb taking a propositional complement like the verbs of saying or thinking.

- (12) a. Wat<sub>i</sub> zei Jan [dat hij t<sub>i</sub> gelezen had]?  
 what said Jan that he read had  
 'What did Jan say that he had read?'  
 b. Wat<sub>i</sub> denk je [dat je t<sub>i</sub> voor je verjaardag zal krijgen]?  
 what think you that you for your birthday will get  
 'What do you think that you will get for you birthday?'

It has been argued that in many languages there is an asymmetry between subjects and objects (as well as other non-subjects) with respect to this kind of "long" *wh*-movement. Whereas objects can undergo long movement, subjects cannot unless the language has some special proviso that makes this movement possible: *Who<sub>i</sub> do you think (\*that) t<sub>i</sub> came*, for example, shows that dropping the complementizer *that* makes extraction of the subject possible in English. In traditional generative grammar this led to the empirical generalization that a complementizer cannot be followed by a subject trace, which was formulated as the °Complementizer-trace Filter in (13), in which C and t<sub>i</sub> stand for, respectively, the complementizer and the trace of the subject.

- (13) Complementizer-trace Filter: \*[ ... C t<sub>i</sub> ...].

At first sight, Dutch seems well-behaved with respect to this filter: whereas the examples in (12) are fully grammatical, example (14a) is marked (although not as bad as its English translation with the overt complementizer *that*). On closer inspection, however, it turns out that the acceptability of examples of this sort is influenced by the type of noun phrase: °D-linked noun phrases like *welke jongen* do not readily allow this movement whereas non-D-linked noun phrases like *wie* do.

- (14) a. ?Welke jongen<sub>i</sub> denk je [dat t<sub>i</sub> het boek zal krijgen]?  
 which boy think you that the book will get  
 'Which boy do you think (\*that) will get the book?'  
 b. Wie<sub>i</sub> denk je [dat t<sub>i</sub> het boek zal krijgen]?  
 who think you that the book will get  
 'Who do you think (\*that) will get the book?'

A possible reason for the difference in acceptability of these two examples may be that, despite appearances, the traces of the two *wh*-phrases do not occupy the same position in the clause. This can be made clearer by considering embedded clauses that do not contain a definite object, like those in (15).

- (15) a. ??Welke jongen<sub>i</sub> denk je [dat (er) t<sub>i</sub> heeft gelogen]?  
 which boy think you that there has lied  
 'Which boy do you think (\*that) has lied?'  
 b. Wie<sub>i</sub> denk je [dat \*(er) t<sub>i</sub> heeft gelogen]?  
 who think you that there has lied  
 'Who do you think (\*that) has lied?'

As can be seen in (15b), the example with *wie* requires that the embedded clause contain the expletive *er*. Since the expletive normally precedes the indefinite subject (cf. *Gisteren heeft er iemand gelogen* 'Yesterday, someone lied') and can therefore

be assumed to occupy the regular subject position, we may conclude that the subject trace does not occupy the regular subject position of the clause in (15b); see Section 8.1.4 for more discussion. If this is a general property of non-D-linked interrogative personal pronouns, the same must hold for (14b). When we now reformulate the generalization given earlier such that it expresses that a complementizer cannot be followed by a trace in the regular subject position, we can conclude that Dutch behaves in accordance with this generalization. Since this chapter is clearly not the place to exhaustively discuss all intricacies of (long) *wh*-movement, we will end our discussion at this point.

8.1.2.2. *Topicalization*

The notion of topicalization refers to the movement process that places some constituent into the clause-initial position of the main clause. The name was probably invented to express that topicalization plays a role in determining the information structure of the clause by moving the discourse topic (the entity the discourse is about) into the first position of the clause. Although this idea might be on the right track, it may not be entirely correct for Dutch since the constituent that fills this position may perform several functions, the pragmatic function of expressing the discourse topic being only one of these. In the following we will discuss some questions concerning topicalization. We start with the question whether clause-initial subjects occupy the same position as other topicalized noun phrase, then continue with the information-structural function of topicalization, and conclude with a short discussion of long topicalization.

1. *Topicalization of subject and object pronouns*

In the unmarked case, the initial constituent of a main clause is the subject. As we have already seen in the discussion of example (1) in Section 8.1.1, nearly all noun phrase types can function as the clause-initial subject, the only exception being °weak noun phrases, which normally occur in the expletive construction, in which case it is not the subject itself but the expletive that fills the clause-initial position. A noteworthy property of clause-initial subjects is that they may also surface as weak (phonetically reduced) pronouns, with the exception of the third person singular masculine form *-ie*, which always follows the finite verb in second position, and the second person plural pronoun, which simply lacks a weak subject form in most varieties of Dutch.

(16) Clause-initial subject pronouns

|                        |           | SINGULAR                                | PLURAL                                                  |
|------------------------|-----------|-----------------------------------------|---------------------------------------------------------|
| 1 <sup>ST</sup> PERSON |           | <i>Ik/'k ben ziek.</i> 'I am ill.'      | <i>Wij/We zijn ziek.</i> 'We are ill.'                  |
| 2 <sup>ND</sup> PERSON |           | <i>Jij/Je bent ziek.</i> 'You are ill.' | <i>Jullie<sup>96</sup> Je zijn ziek.</i> 'You are ill.' |
| 3 <sup>RD</sup> PERSON | MASCULINE | <i>Hij/*-ie is ziek.</i> 'He is ill.'   | <i>Zij/Ze zijn ziek.</i> 'They are ill.'                |
|                        | FEMININE  | <i>Zij/Ze is ziek.</i> 'She is ill.'    |                                                         |
|                        | NEUTER    | <i>Het/'t is ziek.</i> 'It is ill.'     |                                                         |

In this respect, clause-initial subjects differ from topicalized object pronouns, which must always be realized in their strong form. Note that the neuter object pronoun *het*

cannot be used at all, which is due to the fact that it is always pronounced in its weak form (cf. Section 5.2.1.1.5); instead, the neuter demonstrative *dit* ‘this’ or *dat* ‘that’ is normally used.

(17) Clause-initial object pronouns

|                        |           | SINGULAR                                                               | PLURAL                                                                |
|------------------------|-----------|------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 1 <sup>ST</sup> PERSON |           | <i>Mij/*Me heeft Peter niet gezien.</i><br>‘Peter didn’t see ME.’      | <i>Ons heeft Peter niet gezien.</i><br>‘Peter didn’t see US.’         |
| 2 <sup>ND</sup> PERSON |           | <i>Jou/*Je heeft Peter niet gezien.</i><br>‘Peter didn’t see YOU.’     | <i>Jullie/*Je heeft Peter niet gezien.</i><br>‘Peter didn’t see YOU.’ |
| 3 <sup>RD</sup> PERSON | MASCULINE | <i>Hem/*’m heeft Peter niet gezien.</i><br>‘Peter didn’t see HIM.’     | <i>Hun/*Ze heeft Peter niet gezien.</i><br>‘Peter didn’t see THEM.’   |
|                        | FEMININE  | <i>Haar/*’r heeft Peter niet gezien.</i><br>‘Peter didn’t see HER.’    |                                                                       |
|                        | NEUTER    | <i>Dit/*’t heeft Peter niet gezien.</i><br>‘Peter didn’t see IT/THIS.’ |                                                                       |

The discussion above has shown that subject and object pronouns differ in that the latter must be stressed in clause-initial position, whereas the former need not be. This difference between subject and object pronouns has been used to argue that, despite appearances, clause-initial subjects are not topicalized, but rather occupy the regular subject position, which may perhaps also account for the fact that the expletive *er*, which is generally assumed to occupy the subject position, can also be used clause-initially; cf. 8.1.4. This conclusion, if correct, has various theoretical ramifications in that it presupposes that in subject-initial main clauses, the finite verb does not occupy the C(omplementizer)-position but is placed in the lower I(nflection)-position, which in turn implies that the I-position is to the immediate right of the subject position: [<sub>IP</sub> subject I + V<sub>fin</sub> [<sub>VP</sub> ... t<sub>Vfin</sub> (V)]]]. This breaks radically with the more traditional view on the syntax of Dutch, according to which the I-position is in the right periphery of the clause, following the base-positions of the verb(s). Since this is not the place to elaborate on these theoretical consequences, we refer the reader to Zwart (1997) and Broekhuis (2000/2008) for relevant discussion.

## II. Information structure

As was mentioned in the introduction to this section, the notion of topicalization suggests that this movement plays a role in determining the information structure of the clause by moving the discourse topic into the first position of the clause. A potential problem for such a claim is that clause-initial subjects need not be topics. It seems, however, that this problem can be set aside, as we saw in the previous subsection that there are reasons to assume that these subjects are actually not topicalized but occupy the regular subject position. Therefore, it seems indeed possible to maintain that topicalization applies for information-structural reasons. However, we will see below that the preposed phrase need not be a discourse topic, but may also be presented as a contrasted or emphatic °focus; see, e.g., Neeleman & Van de Koot (2008).



*A. Focus*

The fact that object pronouns must be stressed in topicalized position suggests that they are always focused in this position. In the examples in (17) we are simply dealing with emphatic focus, but focus may also be contrastive, as in (18).

- (18) a. MIJ heeft Peter niet gezien, maar HEM wel.  
           me has Peter not seen, but him AFF  
           ‘Peter didn’t see me, but he did see him.’  
       b. JOU heeft Peter niet gezien, maar MIJ wel.  
           you has Peter not seen but me AFF  
           ‘Peter didn’t see you, but he did see me.’

That focus may be involved in topicalization is also clear from the fact that the topicalized phrase can be preceded by focus particles like *zelfs* ‘even’, *alleen* ‘only’ and *slechts* ‘only’, as in (19). These examples also show that these emphatically focused topicalized phrases can incorporate any type of noun phrase: in (19a), we are dealing with a proper noun and a pronoun; in (19b), the topicalized phrase is definite, and in (19c) we are dealing with an indefinite noun phrase containing a numeral/quantifier.

- (19) a. Zelfs JAN/HEM heb ik niets verteld.  
           even Jan/him have I nothing told  
           ‘Even Jan/him, I didn’t tell anything.’  
       b. Alleen de/die MAN heb ik niets verteld.  
           only the/that man have I nothing told  
           ‘Only the/that man I have told nothing.’  
       c. Slechts WEINIG/VIER mensen heb ik gezien.  
           only few/four people have I seen

The examples in (20) show that the subject can also receive contrastive or emphatic focus. Contrastive focus can be found in (20a), and emphatic focus in (20b). Note that in the latter example the indefinite subject has been moved across the expletive *er* into clause-initial position; the fact that the expletive may be present shows (i) that subjects can be topicalized, and (ii) that topicalized indefinite noun phrase can even be construed non-specifically. The latter fact is conclusive for showing that topicalized phrases need not be discourse topics.

- (20) a. JAN wordt ontslagen, maar PETER niet.  
           Jan is fired, but Peter not  
           ‘Jan will be fired, but not Peter.’  
       b. Slechts WEINIG/VIER mensen kwamen (er) naar de lezing.  
           only few/four people came there to the talk

*B. Topic*

Topicalized phrases need not be discourse topics, but they certainly can function as such, as is shown by example (21a). Given the fact that discourse topics are always related to the previous discourse or to the non-linguistic context, in this function topicalized noun phrases typically surface as definite noun phrases, as in the first

sentence in (21a), or, probably more commonly, as definite pronouns. When the discourse topic is very prominent, as in (21b), it can occasionally be dropped.

- (21) a. De man stond op het punt te vertrekken. Hij pakte zijn tas, maar ...  
 the man stood on the point to leave he took his bag but  
 'The man was about to leave. He took his bag, but ...'  
 b. Q: Weet jij waar mijn sleutels zijn?  
 know you where my keys are  
 A: Nee, (die) heb ik niet gezien.  
 no those have I not seen  
 'Do you know where my keys are? No, I haven't seen them.'

### *III. Long topicalization*

The examples in (6) above have shown that, unlike *wh*-movement, topicalization cannot target the initial position of an embedded clause. This does not imply, however, that it is impossible to topicalize some constituent that is part of an embedded clause; topicalization may also target the initial position of a higher main clause. In (22), we give an example of such long topicalization of a direct object, which is perfectly acceptable provided that the moved phrase is assigned contrastive accent.

- (22) Dat BOEK<sub>i</sub> denk ik [dat hij *t<sub>i</sub>* wil hebben].  
 that book think I that he wants to have  
 'That book, I think he would like to have.'

The examples in (23) involve "long" topicalization of a subject. In these cases there is a clear contrast between definite and specific indefinite noun phrases, on the one hand, and nonspecific indefinite noun phrases, on the other. Only the latter are acceptable, provided that the moved phrase is emphatically stressed. Again, this can be accounted for by referring to the generalization in (13) that a complementizer cannot be followed by a trace in subject position. When a nonspecific indefinite noun phrase is topicalized, it is not moved from the regular subject position, which is occupied by the expletive, but from some position following it. When we are dealing with a definite or specific indefinite noun phrase, the expletive is not present and movement proceeds from the regular subject position, resulting in unacceptability.

- (23) a. <sup>??</sup>De JONGEN<sub>i</sub> denk ik [dat *t<sub>i</sub>* gelogen heeft].  
 the boy think I that lied has  
 b. Een JONGEN<sub>i</sub> denk ik [dat <sup>??</sup>(er) *t<sub>i</sub>* gelogen heeft].  
 a boy think I that there lied has

Since this chapter is not the place to exhaustively discuss all intricacies of (long) topicalization, we will end our discussion at this point.

#### *8.1.3. Object noun phrases in the middle field of the clause: Scrambling*

Generally, nominal objects can occupy various positions in the so-called °middle field of the clause, that is, that part of the clause bounded to the left by the

C(omplementizer)-position, which is filled by the complementizer in embedded clauses and by the finite verb in main clauses, and bounded to the right by the verbs in clause-final position (if present). This variation in word order especially relates to the position of the nominal object relative to adverbial phrases of various sorts: for instance, the noun phrase *zijn auto* ‘his car’ in (24) can either follow or precede the modal adverb *waarschijnlijk* ‘probably’.

- (24) a. dat Jan waarschijnlijk zijn auto verkoopt.  
           that Jan probably his auto sells  
           ‘that Jan will probably sell his car.’  
       a’. dat Jan zijn auto waarschijnlijk verkoopt.  
       b. Jan heeft waarschijnlijk zijn auto verkocht.  
           Jan has probably his car sold  
           ‘Jan probably sold his car.’  
       b’. Jan heeft zijn auto waarschijnlijk verkocht.

Since the direct object is generally assumed to be base-generated within the VP, it is expected to be adjacent to the main verb, as in the primeless examples in (24). In order to account for the word orders in the primed examples, it has been assumed that Dutch has a SCRAMBLING rule that may move the arguments of the verb from their VP-internal base-position into a position preceding the adverbs. The structures of the primed examples in (24) are therefore assumed to be as indicated in (25).

- (25) • Scrambling  
       a. [ ... C ... DP<sub>i</sub> ... ADV ... [<sub>VP</sub> ... t<sub>i</sub> V]].  
       b. dat Jan zijn auto<sub>i</sub> waarschijnlijk [<sub>VP</sub> t<sub>i</sub> verkoopt]  
       c. Jan heeft zijn auto<sub>i</sub> waarschijnlijk [<sub>VP</sub> t<sub>i</sub> verkocht]

Actually, it can be argued that there are various types of scrambling (cf., e.g., Neeleman 1994b); for example, there is a rule of Focus-movement, which optionally places emphatically or contrastively focused phrases, and a rule of Neg-movement (Haegeman 1995), which obligatorily places negative phrases into a more leftward position in the middle field. We will not discuss these two movement types here, given that they are not restricted to nominal objects, but restrict our attention to the type of scrambling in (25a), which is limited to nominal objects and can be recognized by the fact that the moved phrase is never accented. We will see that word order variations like those in (24) are typically related to the information structure of the clause: scrambled noun phrases normally belong to the presupposition (“old” information) whereas noun phrases that are not scrambled are instead part of the °focus (“new” information) of the clause. Other effects of scrambling may be that the moved noun phrase is assigned a special (e.g., generic or partitive) meaning.

#### 8.1.3.1. *Clauses containing a clause adverb*

This section discusses the distribution of nominal objects in clauses containing a °clause adverb such as modal adverbs or adverbs of frequency. It will be shown that the position of the noun phrase is intimately related to the information structure of the clause, especially the distinction between focus and presupposition, that is,

“new” and “old” information. These notions will be explained in Subsection I. We start with a discussion of definite noun phrases and personal pronouns, which is followed by a discussion of indefinite and quantified noun phrases.

### I. Definite noun phrases

Definite nominal objects can occur both to the left and to the right of a clause adverb. The placement of the noun phrase to the left or to the right of such an adverb is not free, however, but intimately related to the information structure of the clause. Consider the examples in (26). The direct object *het boek* in (26a) follows the modal adverb *waarschijnlijk* ‘probably’ and is construed as part of the “new” information or focus of the clause; due to the prosodic structure of Dutch clauses, the sentence accent naturally falls on the direct object, which enhances a focus interpretation for this noun phrase. In (26b), on the other hand, the object has been scrambled to the left of the adverb, and as a result it no longer receives sentence accent; scrambled nominal objects cannot be interpreted as (part of the) focus, but are rather construed as topics of discussion, belonging to the “old” information or presupposition of the utterance (Verhagen 1986).

- (26) a. Hij heeft waarschijnlijk het boek gelezen.  
           he has probably the book read  
       b. Hij heeft het boek waarschijnlijk gelezen.  
           he has the book probably read

At this point a remark on the terminology is in order. The notions “new” and “old” information may be confusing since the former suggests that the referent of the noun phrase *het boek* in (26) is not part of the domain of discourse (domain D), whereas the latter suggests that it is. This is clearly not the case, since in both cases the hearer is assumed to be able to uniquely identify this referent. The notions rather refer to the information structure of the clause; the “old” information refers to the entities currently under discussion, whereas the “new” information refers to entities that may be part of the background of the discourse (that is, part of domain D) but were so far not a topic of discussion. In order to avoid the misleading connotations of the notions of “new” and “old” information, we will generally use the notions “focus” and “presupposition” in this work (despite the fact that the former can be easily confused with the notion of CONTRASTIVE or EMPHATIC FOCUS).

The distinction between presupposition and focus is especially clear in question-answer contexts. A question like (27a) introduces the referent of *het boek* as a topic of discussion, and therefore the answer preferably has the noun phrase in front of the adverb, that is, presents the noun phrase as “old” information; in actual speech, this is made even clearer by replacing the noun phrase *het boek* by the personal pronoun *het*, which typically refers to “old” information (see II below).

- (27) a. Wat heeft Jan met het boek gedaan? [question]  
           what has Jan with the book done  
       b. <sup>??</sup>Hij heeft waarschijnlijk het boek gelezen. [answer = (26a)]  
       b'. Hij heeft het boek waarschijnlijk gelezen. [answer = (26b)]

A question like (28a), on the other hand, clearly does not presuppose the referent of the noun phrase *het boek* to be a topic of discourse, and now the preferred answer has the noun phrase following the adverb. The answer in (28b') with the nominal object preceding the adverb is only possible when the context provides more information, e.g., when the participants in the discourse know that Jan had the choice between reading a set of articles or reading a certain book; in that case the nominal object preceding the adverb is likely to have contrastive accent.

- (28) a. Wat heeft Jan gelezen? [question]  
           what has Jan read  
       b. Hij heeft waarschijnlijk het boek gelezen. [answer = (26a)]  
       b'. \*<sup>?</sup>Hij heeft het boek waarschijnlijk gelezen. [answer = (26b)]

That the noun phrase *het boek* refers to “new” information is also clear from the fact that replacing the noun phrase *het boek* by the personal pronoun *het* gives rise to an infelicitous result: using the pronoun makes the answer uninformative since it presupposes (contrary to fact) that the identity of the referent is already known to the person asking the question.

Note that in (28) the activity of reading is still presupposed as a topic. This is not the case in an example like (29), but in this case also the utterance with the direct object following the adverb is strongly preferred. The answer with the nominal object preceding the adverb is only possible when the context provides more information, e.g., when the participants in the discourse know that Jan had the choice between reading the book or following a crash course in linguistics. Note that (29) shows that (26a) can be construed not only with the noun phrase *het boek*, but also with the complete verb phrase *het boek gelezen*, as “new” information.

- (29) a. Wat heeft Jan gedaan? [question]  
           what has Jan done  
       b. Hij heeft waarschijnlijk het boek gelezen. [answer = (26a)]  
       b'. \*<sup>?</sup>Hij heeft het boek waarschijnlijk gelezen. [answer = (26b)]

To conclude we want to note that according to some research the informational-structural effect described above are tendencies not absolute rules.

## II. Referential personal pronouns

Referential personal pronouns are typically used to refer to active topics of discussion. Therefore, we correctly predict them to normally occur in a position preceding the clause adverbs. This is clear from the fact that in an example like (30a), the pronoun *het* must precede the adverb *waarschijnlijk* ‘probably’.

- (30) Jan heeft <het> waarschijnlijk <\*het> gelezen.  
       Jan has it probably read  
       ‘Jan has probably read it.’

The requirement that personal pronouns precede the clause adverbs can, however, be overruled in contrastive contexts by assigning contrastive focus accent to the pronoun. Given the fact that weak pronouns cannot be assigned accent, this is only possible with strong pronouns. Some illustrative examples are given in (31); the

primed examples show that in these cases placement of the contrastively focused pronoun in front of the adverb is also possible, and even seems to be preferred by some. Note that the ungrammatical variant of (30) cannot be saved by assigning contrastive accent to the pronoun *het*, due to the fact that *het* normally cannot be assigned accent; cf. Section 5.2.1.1.5.

- (31) a. Jan kiest waarschijnlijk <sup>(?)</sup>MIJ/\*me als begeleider, niet JOU.  
 Jan chooses probably me/me as supervisor, not you  
 a'. Jan kiest MIJ waarschijnlijk als begeleider, niet JOU.  
 b. Jan heeft waarschijnlijk <sup>(?)</sup>HEM/\*'m uitgenodigd, niet HAAR.  
 Jan has probably him/him prt.-invited not her  
 b'. Jan heeft HEM waarschijnlijk uitgenodigd, niet HAAR.

When the negative adverb *niet* 'not' is placed in the first conjunct, both orders are completely acceptable; this is illustrated in (32). The difference between the primeless and the primed examples is that in the former the negative adverb *niet* acts as constituent negation and in the latter as sentential negation; cf. Section 8.1.3.4.

- (32) a. Jan kiest waarschijnlijk niet MIJ als begeleider, maar JOU.  
 Jan chooses probably not me as supervisor, but you  
 a'. Jan kiest MIJ waarschijnlijk niet als begeleider, maar wel JOU.  
 Jan chooses me probably not as supervisor, but AFF. you  
 b. Jan heeft waarschijnlijk niet HEM uitgenodigd, maar HAAR.  
 Jan has probably not him prt.-invited but her  
 b'. Jan heeft HEM waarschijnlijk niet uitgenodigd, maar wel HAAR.  
 Jan has him probably not prt.-invited but AFF. her

### III. Indefinite noun phrases

Scrambling of indefinite nominal objects across a clause adverb is possible in some but not all constructions, and when it does occur, scrambling has important semantic repercussions: scrambling may change the °scope relation between the indefinite noun phrase and some other quantified expression, or force a generic reading of the moved noun phrase.

#### A. Scope

The examples in (33) show that (both nonspecific and specific) indefinite nominal objects cannot readily appear to the left of a modal adverb like *waarschijnlijk*.

- (33) a. dat Jan waarschijnlijk een vriend zal bezoeken.  
 that Jan probably a friend will visit  
 a'. <sup>\*?</sup>dat Jan een vriend waarschijnlijk zal bezoeken.  
 b. dat Jan waarschijnlijk [<sub>NP</sub> Ø vrienden] zal bezoeken.  
 that Jan probably friends will visit  
 b'. <sup>\*?</sup>dat Jan [<sub>NP</sub> Ø vrienden] waarschijnlijk zal bezoeken.

However, scrambling of indefinite nominal objects is often possible when the clause adverb expresses frequency, and coincides with a difference in scope. First,

consider example (34a), in which the indefinite noun phrase follows the adverbial phrase *elke dag* 'every day'. This example contends that Jan has the habit of watching (at least) one program a day on TV, where the program may change from day to day. However, when the speaker has a specific television program in mind that Jan watches every day (e.g., the eight o'clock news), he is not likely to use example (34a); he would probably use an example like (34b) instead, where *één* is stressed so that we cannot determine whether we are dealing with the indefinite article *een* 'a' or the numeral *één* 'one'. The fact that a nonspecific indefinite bare plural like *programma's* in the primed examples cannot be placed in front of the adverb, however, suggests the latter.

- (34) a. dat Jan elke dag een programma op tv bekijkt.  
         that Jan every day a program on TV watches  
       a'. dat Jan elke dag programma's op tv bekijkt.  
         that Jan every day programs on TV watches  
       b. dat Jan één programma op tv elke dag bekijkt.  
         that Jan a/one program on TV every day watches  
       b'. ??dat Jan programma's op tv elke dag bekijkt.  
         that Jan programs on TV every day watches

This suggestion is further supported by the fact that a plural noun phrase preceded by a numeral show the same difference in reading as (34a&b): (35a) expresses that Jan watches two programs every day, where the programs may change from day to day, whereas (35b) expresses that Jan watches the same two programs every day.

- (35) a. dat Jan elke dag twee programma's op tv bekijkt.  
         that Jan every day two programs on TV watches  
       b. dat Jan twee programma's op tv elke dag bekijkt.  
         that Jan two programs on TV every day watches

From this we may conclude that the difference in scope between the indefinite noun phrase and the universally quantified adverbial phrase is reflected in the linear order of the two: in (35a) the universal operator expressed by the temporal adverbial phrase has scope over the existential operator implied by the indefinite noun phrase ( $\forall t \exists x$ ), and in (35b) the scope relation is inverted ( $\exists x \forall t$ ).

### B. Genericity

Another possible effect of scrambling is that the indefinite noun phrase receives a generic interpretation. Consider the examples in (36). Example (36a) expresses that Jan is reading something which is probably a bestseller (or, alternatively, that Jan is doing something, which is probably reading a bestseller). Example (36a'), on the other hand, expresses that bestsellers are likely to be read by Jan. The same pattern is even clearer in (36b&b'): (36b) expresses that Jan generally reads some bestseller, whereas (36b') expresses that most bestsellers are read by Jan. The (c)-examples provide similar examples with plural noun phrases: (36c) expresses that Jan generally reads bestsellers, whereas (36c') expresses that most bestsellers are read by Jan.

- (36) a. dat Jan waarschijnlijk een bestseller leest.  
           that Jan probably a bestseller reads  
       a'. dat Jan een bestseller waarschijnlijk leest.  
       b. dat Jan meestal een bestseller leest.  
           that Jan generally a bestseller reads  
       b'. dat Jan een bestseller meestal leest.  
       c. dat Jan meestal bestsellers leest.  
           that Jan generally bestsellers reads  
       c'. dat Jan bestsellers meestal leest.

Scrambling of indefinite nominal objects is also possible, and is perhaps even preferred, when the noun phrase contains an attributive adjective like *volgende* 'next' or *nieuwe* 'new' or an ordinal numeral, as in the examples in (37). The indefinite noun phrases in these examples seem comparable to English noun phrases containing free choice *any*: Jan will turn down any invitation that comes next; the Security Council will condemn any attack that comes next. Since we are not aware of any discussion of data like these in the literature, we will leave these for future research; see also example (64) for comparable examples with the negative adverb *niet* 'not'.

- (37) a. Jan zal een volgende/nieuwe uitnodiging waarschijnlijk afslaan.  
           Jan will a next/new invitation probably turn.down  
           'Jan will probably turn down any invitation that comes next/new invitation.'  
       a'. <sup>?</sup>Jan zal waarschijnlijk een volgende/nieuwe uitnodiging afslaan.  
       b. De Veiligheidsraad zal een nieuwe/tweede aanval waarschijnlijk veroordelen.  
           the Security Council will a new/second attack probably condemn  
           'The Security Council will probably condemn a subsequent/second attack.'  
       b'. <sup>?</sup>De Veiligheidsraad zal waarschijnlijk een nieuwe/tweede aanval veroordelen.

#### IV. Quantified noun phrases and quantifiers

This subsection discusses scrambling of quantified nominal objects and quantifiers, and its semantic effects. Existentially, universally and negatively quantified noun phrases are discussed in separate sections. Before we start we want to note that the felicitousness of a certain word order is often determined not only by the quantifier in question, but also by the meaning of the predicate; certain orders may be infelicitous because they give rise to an improbable reading with some predicates. In the following we will abstract away from these effects of the choice of the predicate but simply select predicates that give rise to felicitous results.

##### A. Existentially quantified noun phrases

The placement of an existentially quantified nominal object with respect to a modal adverb like *waarschijnlijk* 'probably' seems to depend on the nature of the quantifier. When the quantifier normally triggers a nonspecific reading of the noun phrase, as does *enkele* 'some' in (38a&a'), the nominal object is preferably placed after the adverb. When the quantifier allows both a nonspecific and a specific reading, as does *veel* 'many' in (38b&b'), the nominal object can readily occur on either side of the adverb. When the quantifier normally triggers a specific reading,



as does *sommige* ‘some’ in (38c’), the nominal object is preferably placed in front of the adverb. In all cases, a nominal object in front of the adverb is construed as specific, whereas one following the adverb is construed as nonspecific (unless it is assigned emphatic focus).

- (38) a. dat Jan waarschijnlijk enkele boeken weggooit.  
           that Jan probably       some books   throws.away  
       a’. ?dat Jan enkele boeken waarschijnlijk weggooit.  
       b. dat Jan waarschijnlijk veel boeken weggooit.  
           that Jan probably       many books   throws.away  
       b’. dat Jan veel boeken waarschijnlijk weggooit.  
       c. ?dat Jan waarschijnlijk sommige boeken weggooit.  
           that Jan probably       some books   throws.away  
       c’. dat Jan sommige boeken waarschijnlijk weggooit.

Note that we have avoided the use of the notions of weak and strong quantifier (cf. Section 6.2.1, sub II) in the description of the data in (38): since we will see in the next subsection that the (strong) universal quantifier *alle* is preferably placed after the °clause adverbs, we cannot say that strong quantifiers are preferably scrambled, whereas weak quantifiers are preferably left in their position to the right of the clause adverbs. Nevertheless, this seems to provide an apt description of the behavior of the strong/weak *existential* quantifiers.

In (35), we have observed that scrambling of indefinite nominal objects affects the scope relations in the clause. When we are dealing with a noun phrase containing an existential quantifier, the same effect can be observed. Consider the examples in (39). In (39a) the frequency adverb has scope over the quantified noun phrase *veel boeken* ‘many books’: as a result the sentence expresses that it is often the case that Jan is reading many books. In (39b), on the other hand, it is the noun phrase that has scope over the adverb: as a result the sentence expresses that there are many books that Jan often reads.

- (39) a. dat Jan vaak veel boeken leest.  
           that Jan   often many books   reads  
       b. dat Jan veel boeken vaak leest.

This difference in interpretation can also be held responsible for the fact that an adverb like *meestal* ‘usually’ cannot follow a quantified nominal object: whereas it makes perfect sense to claim that Jan usually reads many books, it seems weird to say that many books are usually read by Jan. Similarly, it may account for the fact that a strong noun phrase like *sommige boeken* ‘some books’, which presupposes a certain set of books and is therefore specific, cannot readily be used in the position following the adverb.

- (40) a. dat Jan meestal veel boeken leest.  
           that Jan   usually many books   reads  
       a’. ??dat Jan veel boeken meestal leest.  
       b. \*?dat Jan vaak sommige boeken leest.  
           that Jan   often some books       reads  
       b’. dat Jan sommige boeken vaak leest.

The existential personal pronouns *iemand* 'someone' and *iets* 'something' also allow both a nonspecific and a specific interpretation. As in the quantified noun phrases discussed above, the availability of these readings depends on whether the noun phrase occurs to the right or to the left of the adverb. Note that the specific readings in the primed examples are not completely natural.

- (41) a. dat Jan waarschijnlijk iemand uitnodigt.  
           that Jan probably someone prt.-invites  
       a'. ?dat Jan iemand waarschijnlijk uitnodigt.  
       b. dat Jan waarschijnlijk iets aan Peter wil geven.  
           that Jan probably something to Peter wants give  
       b'. ?dat Jan iets waarschijnlijk aan Peter wil geven.

Again, the position of the nominal object affects the scope readings: whereas the frequency adverb has scope over the existential pronouns in the primeless examples of (42), the pronouns have scope over the adverb in the primed examples. As a result, (42a) contends that it has often been the case that Jan insulted some person or other, whereas (42a') expresses that there is a certain person who has often been insulted by Jan. Similarly, (42b) contends that it has often been the case that Jan dropped something, whereas (42b') expresses that there is a certain thing that has often been dropped by Jan. Observe that, in contrast to the primed examples in (41), the primed examples in (42) are impeccable.

- (42) a. dat Jan vaak iemand heeft uitgescholden.  
           that Jan often someone has prt.-insulted  
       a'. dat Jan iemand vaak heeft uitgescholden.  
       b. dat Jan vaak iets laat vallen.  
           that Jan often something drops  
       b'. dat Jan iets vaak laat vallen.

### B. Universally quantified noun phrases

The examples in (43) suggest that universally quantified phrases have some preference for the position following the modal adverb *waarschijnlijk* 'probably', but both orders seem to be grammatical. The difference between the two examples seems to be related to the information structure in the clause. In (43b), it is only the action of inviting that is part of the focus of the clause. Example (43a) is compatible with various information structures: the focus of the clause can be formed by the full VP *alle studenten uitnodigen*, the noun phrase *alle studenten*, or the quantifier *alle* — in the first two cases sentence stress falls on the noun *studenten*, and in the third case on the quantifier *alle*.

- (43) a. Marie zal waarschijnlijk alle studenten uitnodigen.  
           Marie will probably all students prt.-invite  
           'Marie will probably invite all students.'  
       b. <sup>(?)</sup>Marie zal alle studenten waarschijnlijk uitnodigen.

The two examples also seem to differ in interpretation. Example (43a) can be interpreted either as referring to a single event of inviting all the students or as

referring to several separate events of inviting a student or subgroup of students, whereas (43b) strongly favors the latter interpretation. This meaning difference is probably related to the scope of the modal adverb *waarschijnlijk* 'probably'. In (43b) the universally quantified phrase is outside the scope of the modal adverb, and, as a result, it is claimed for each individual student that he will probably be invited. In (43a), on the other hand, the universally quantified phrase is within the scope of the modal adverb, and, as a result, it is claimed that it is probably the case that all students will be invited, where it is immaterial whether they are invited individually or as a group. The universal quantifiers *iedereen* 'everyone' and *alles* 'everything' also seem to prefer the position to the right of the modal adverb, but again both orders seem to be acceptable.

- (44) a. dat Jan waarschijnlijk iedereen/alles meeneemt.  
           that Jan probably everyone/everything prt.-takes  
           'that Jan probably takes everyone/everything with him.'  
       b. ?dat Jan iedereen/alles waarschijnlijk meeneemt.

Universally quantified nominal objects can readily occur on both sides of the adverbs of frequency. This gives rise to a difference in interpretation, which can again be expressed in terms of scope: in (45a'), the universally quantified noun phrase is outside the scope of the adverb, and as a result it is claimed for each individual book in the relevant domain of discourse that John often takes it with him; in (45a), on the other hand, the universally quantified noun phrase is within the scope of the frequency adverb, and as a result it is claimed that it is often the case that John takes all books with him. Examples (45b&b') show that the same thing holds for universal quantifiers such as *alles* 'everything'.

- (45) a. dat Jan vaak alle boeken meeneemt.  
           that Jan often all books prt.-takes  
           'that Jan often takes all books with him.'  
       a'. dat Jan alle boeken vaak meeneemt.  
       b. dat Jan vaak alles meeneemt.  
           that Jan often everything prt.-takes  
           'that Jan often takes everything with him.'  
       b'. ?dat Jan alles vaak meeneemt.

### C. Negative quantifiers

Given that the negative quantifiers *niemand* 'nobody' and *niets* 'nothing' do not allow a specific interpretation, it does not come as a surprise that such noun phrases must follow the modal adverbs, as is illustrated by (46a&b). Another factor that may play a role here is that, in general, negative phrases tend to follow the modal adverbs. This even holds for subjects, as is shown in (46c).

- (46) a. dat Jan <\*niemand> waarschijnlijk <niemand> uitnodigt.  
           that Jan nobody probably invites  
       b. dat Jan <\*niets> waarschijnlijk <niets> aan Peter wil geven.  
           that Jan nothing probably to Peter wants give  
       c. dat <??niemand> waarschijnlijk <niemand> dat boek gelezen heeft.  
           that nobody probably that book read has

However, unlike modal adverbs, the negative quantifiers can precede the frequency adverbs. The two examples in (47), which are the negative counterparts of the primed examples in (42), respectively express that there is not a certain person who has often been insulted by Jan and that there is not a certain thing that has often been dropped by Jan.

- (47) a. dat Jan niemand vaak heeft uitgescholden.  
           that Jan nobody often has prt.-insulted  
       b. dat Jan niets vaak laat vallen.  
           that Jan nothing often drops

The examples in (48) show that the negative quantifiers can also follow the adverbs of frequency. In these examples the quantifier is in the scope of the adverb: (48a) expresses that it is often the case that Jan does not want to see anyone and (48b) that it is often the case that Jan does not want to eat anything.

- (48) a. dat Jan vaak niemand wil zien.  
           that Jan often nobody wants see  
           ‘that Jan often doesn’t want to see anyone.’  
       b. dat Jan vaak niets wil eten.  
           that Jan often nothing wants eat  
           ‘that Jan often doesn’t want to eat anything.’

#### *V. Interplay of indirect and direct objects*

In the subsections above, we have seen that scrambling is related to several meaning aspects of the clause: scrambling affects the information structure of the clause, it affects the scope relations between quantifiers, and it may trigger a partitive or generic reading of the moved nominal object. This section will show that there are also syntactic constraints on this movement.

So far, we have mainly considered scrambling of the direct object in the clause, but indirect objects behave in more or less the same way. This implies that in double object constructions like (49), there are various word order possibilities. In (49a), neither of the objects is scrambled, which leads to an interpretation according to which both the indirect and the direct object are part of the focus of the clause. In (49b), the indirect object is scrambled, but the direct object is not, which leads to an interpretation according to which the indirect object is part of the presupposition, and the direct object is part of the focus of the clause. In (49c), both objects are scrambled, which leads to a reading according to which they are both part of the presupposition. Given this, one would expect that it is also possible to scramble just the direct object, that is, to move the direct object across the indirect object. As is shown in (49d), however, this is not possible, from which we must conclude that the indirect object blocks movement of the direct object. In order to express that it is only the indirect object that belongs to the focus of the clause, one has to use (49a) with sentence accent on the noun *moeder* (and not on the direct object, as would normally be the case), or a construction with a periphrastic indirect object: *dat Jan het boek waarschijnlijk aan zijn moeder heeft gegeven* ‘that Jan probably has given the book to his mother’.

- (49) a. dat Jan waarschijnlijk zijn moeder het boek heeft gegeven.  
           that Jan probably his mother the book has given  
           ‘that Jan probably has given his mother the book.’  
       b. dat Jan zijn moeder waarschijnlijk het boek heeft gegeven.  
       c. dat Jan zijn moeder het boek waarschijnlijk heeft gegeven.  
       d. \*dat Jan het boek waarschijnlijk zijn moeder heeft gegeven.

When the two objects are personal pronouns, they are considered to be part of the presupposition of the clause (unless they are assigned emphatic or contrastive focus), as a result of which they must precede the adverb. Remarkably, this results in a change of order of the two objects: the ungrammaticality of (50c) shows that the direct object may no longer follow the indirect object, but must precede it, as in (50d).

- (50) a. \*dat Jan waarschijnlijk haar het heeft gegeven.  
       b. \*dat Jan haar waarschijnlijk het heeft gegeven.  
       c. \*dat Jan haar het waarschijnlijk heeft gegeven.  
       d. dat Jan het haar waarschijnlijk heeft gegeven.  
           that Jan it her probably has given  
           ‘that Jan probably has given it to her.’

When only the indirect object is a pronoun, we correctly predict that it must precede the adverb (unless it is assigned emphatic focus). The direct object may either follow or precede the adverb, depending on whether it is seen as part of the focus or the presupposition of the clause.

- (51) a. \*dat Jan waarschijnlijk haar het boek heeft gegeven.  
       b. dat Jan haar waarschijnlijk het boek heeft gegeven.  
           that Jan her probably the book has given  
           ‘that Jan probably has given her the book.’  
       c. dat Jan haar het boek waarschijnlijk heeft gegeven.

When only the direct object is a pronoun, it must be scrambled. In that case, the indirect object cannot remain in its position after the adverb (unless, perhaps, when it is emphatically stressed), which is probably due to the fact that it would block scrambling of the direct object in this position; cf. example (49d). Note that, as is shown in (52c&d), the pronoun can either precede or follow the indirect object. The question mark within parentheses in (52d) is used to indicate that this example seems fully acceptable but marked compared to the periphrastic construction *dat Jan het waarschijnlijk aan zijn moeder heeft gegeven* ‘that Jan has probably given it to his mother’.

- (52) a. \*dat Jan waarschijnlijk zijn moeder het heeft gegeven.  
       b. \*dat Jan het waarschijnlijk zijn moeder heeft gegeven.  
       c. ?dat Jan zijn moeder het waarschijnlijk heeft gegeven.  
           that Jan his mother it probably has given  
           ‘that Jan probably has given it to his mother.’  
       d. (?)dat Jan het zijn moeder waarschijnlijk heeft gegeven.

The examples in this subsection suggest that scrambling of the direct object is not possible across the indirect object when the latter occurs in the position following the clause adverb, that is, when the latter is not scrambled. Here it must be noted that this constraint applies not only to scrambling but also to *wh*-movement and topicalization (Haegeman 1991 and Den Dikken 1995). The examples in (53) show that *wh*-movement of the direct object gives rise to a marginal result when the indirect object follows the clause adverb *waarschijnlijk* but is perfectly acceptable when the indirect object is scrambled. This shows that the relevant constraint is not based on some “preference rule” that wants to keep the order of the indirect and direct object fixed in order to facilitate parsing, because this would leave the contrast between the primeless and primed examples in (53) unexplained. Therefore, some deeper principle must be at work here; see Broekhuis (2000/2008) for a proposal.

- (53) a. \*?Wat heeft hij vaak zijn moeder aangeboden?  
       a'. Wat heeft hij zijn moeder vaak aangeboden?  
           what has he his mother often prt.-offered  
           ‘What did he often offer to his mother?’  
       b. \*?Dat boek heeft hij vaak zijn moeder aangeboden.  
       b'. Dat boek heeft hij zijn moeder vaak aangeboden.  
           that book has he his mother often prt.-offered  
           ‘That book he has often offered to his mother.’

#### 8.1.3.2. *Clauses containing a VP adverb*

The previous section has shown that nonspecific nominal objects cannot readily be scrambled across a clause adverb. We may not, however, conclude from this that nonspecific nominal objects categorically resist scrambling. Consider the examples in (54), which show that nonspecific indefinite nominal objects may either precede or follow °VP adverbs of time and place. The sentences differ in the assignment of the sentence accent. In the primeless examples, sentence accent is preferably assigned to the nominal head of the indefinite object, whereas in the primed examples it is preferably assigned to the nominal head of the complement of the adverbial PP. This corresponds to the prominence within the focus field of the clause, that is, within the part of the clause expressing “new” information, which can roughly be defined as that part of the middle field of the clause following the clause adverbs. In the primeless examples the object is the most prominent element in the focus field, whereas in the primed examples it is the adverbial phrase that is most prominent; cf. Broekhuis (2007/2008).

- (54) a. Jan heeft waarschijnlijk in de tuin een BOEK gelezen.  
           Jan has probably in the garden a book read  
           ‘Jan probably read a book in the garden.’  
       a'. Jan heeft waarschijnlijk een boek in de TUIN gelezen.  
       b. Jan heeft mogelijk al in de pauze een kop KOFFIE gedronken.  
           Jan has possibly already during the break a cup of coffee drunk  
           ‘Jan has possibly already drunk a cup of coffee during the break.’  
       b'. Jan heeft mogelijk al een kop koffie in de PAUZE gedronken.

The hypothesis that the orders in (54) are related to prominence within the focus field predicts that the orders in the primed examples are only possible when the VP adverb can be interpreted as part of the focus of the clause. Since indefinite nominal objects are more likely to be part of the focus of the clause than, e.g., adverbial pro-forms such as *daar* 'there' and *toen* 'then', it does not really come as a surprise that the primed examples in (55) are unacceptable.

- (55) a. Jan heeft waarschijnlijk daar een boek gelezen.  
 Jan has probably there a book read  
 'Jan probably read a book there.'  
 a'. \*Jan heeft waarschijnlijk een boek daar gelezen.  
 b. Jan had mogelijk toen een kop koffie gedronken.  
 Jan had possibly then a cup of coffee drunk  
 'Jan had possibly drunk a cup of coffee then.'  
 b'. \*Jan had mogelijk een kop koffie toen gedronken.

In (56), we show that similar facts can be found with nonspecific indefinite nominal objects containing a quantifier or a numeral. Substituting a pro-form for the adverbial phrase in the primed examples in (56) leads to unacceptability.

- (56) a. Jan heeft waarschijnlijk in de tuin enkele/twee BOEken gelezen.  
 Jan has probably in the garden some/two books read  
 a'. Jan heeft waarschijnlijk enkele/twee boeken in de TUIN gelezen.  
 b. Jan heeft waarschijnlijk in de pauze enkele/twee koppen KOFFie gedronken.  
 Jan has probably during the break some/two cups of coffee drunk  
 b'. Jan heeft waarschijnlijk enkele/twee koppen koffie in de PAUze gedronken.

Definite nominal objects, on the other hand, do not readily follow the VP adverbs. The primeless examples in (57) seem grammatical but are certainly marked compared to the primed ones. The primeless examples also show that they are preferably pronounced with an emphatic or contrastive focus accent on the noun, indicated by means of small caps. In the primed examples the adverbial PP can be replaced by the pro-forms *daar* 'there' and *toen* 'then'; this is most likely when these pro-forms are assigned emphatic or contrastive focus.

- (57) a. ?Jan heeft waarschijnlijk in de tuin het BOEK gelezen.  
 Jan has probably in the garden the book read  
 a'. Jan heeft waarschijnlijk het boek in de tuin gelezen.  
 b. ?Jan heeft waarschijnlijk in de pauze zijn KOFFie genuttigd.  
 Jan has probably during the break his coffee drunk  
 b'. Jan heeft waarschijnlijk zijn koffie in de pauze genuttigd.

It must be noted however, that examples like (57a&b) are fully acceptable when we are dealing with more or less fixed collocations like *het gras maaien* 'to mow the grass/lawn' in (58).

- (58) a. Jan heeft waarschijnlijk in de tuin het GRAS gemaaid.  
 Jan has probably in the garden the grass mown  
 'Jan has probably mown the lawn in the garden.'
- b. Jan heeft waarschijnlijk in de pauze het GRAS gemaaid.  
 Jan has probably during the break the grass mown  
 'Jan has probably mown the lawn during the break.'

The examples in this section have shown that we cannot claim that scrambling of nonspecific indefinite nominal objects is categorically blocked, since scrambling of such noun phrases is possible across VP adverbs. The effect of this kind of scrambling seems to be related to prominence in the focus field (the field expressing the new information of the clause). This fact has received little attention in the literature so far, and we believe that more research is needed in order to obtain a better understanding of the factors that affect the order of the constituents in the focus field of the clause. Furthermore, we want to refer the reader to Slioussar (2007) for relevant discussion pertaining to scrambling in Russian, which can perhaps partly be carried over to Dutch.

#### 8.1.3.3. *Clauses containing an adverb to the left of a clause adverb*

Whereas VP-adverbs must occur to the right of clause adverbs, there are also adverbial phrases that may occur to the left of typical clause adverbs like the modal verb *waarschijnlijk* 'probably'. This holds, for example, for the time and place adverbs in (59). Example (59a) shows that such time adverbs may co-occur with time adverbs that function as VP-adverbs; the former are used to restrict the relevant time interval during which the event may in principle take place (time interval *j* in the tense representations given in Section N1.5), whereas the latter pinpoint the time at which the event denoted by the main verb actually takes place (time interval *k*). In (59b), the two adverbial phrases of place exhibit similar behavior: the first restricts the location at which the event can in principle take place, whereas the second pinpoints the actual place where it takes place.

- (59) a. Jan zal morgen waarschijnlijk om drie uur vertrekken.  
 Jan will tomorrow probably at 3 o'clock leave  
 'Tomorrow, Jan will probably leave at 3 o'clock.'
- b. Jan zal in Amsterdam waarschijnlijk bij zijn tante logeren.  
 Jan will in Amsterdam probably with his aunt stay  
 'In Amsterdam Jan will probably stay with his aunt.'

The examples in (60) show that although scrambling of a definite noun phrase across the clause adverb is possible, scrambling across the higher locational or temporal adverbial phrase gives rise to a marked result; placing the noun phrase in front of the higher place/time adverb normally requires that the adverbial phrase be assigned accent.



- (60) a. Jan zal <?het boek> morgen <het boek> waarschijnlijk <het boek> lezen.  
 Jan will the book tomorrow probably read  
 'Jan will probably read the book tomorrow.'
- b. Jan zal <?het boek> thuis <het boek> waarschijnlijk <het boek> lezen.  
 Jan will the book at.home probably read  
 'Jan will probably read the book at home.'

The behavior of definite pronouns differs markedly from that of definite noun phrases; the pronoun must cross not only the clause adverb but also the higher place/time adverb.

- (61) a. Jan zal <het> morgen <\*het> waarschijnlijk <\*het> lezen.  
 Jan will it tomorrow probably read  
 'Jan will probably read the book tomorrow.'
- b. Jan zal <het> thuis <\*het> waarschijnlijk <het boek> lezen.  
 Jan will it at.home probably read  
 'Jan will probably read the book at home.'

The contrast between the examples in (60) and (61) suggests that definite pronouns must be moved into some more leftward position than definite noun phrases.

#### 8.1.3.4. *Clauses containing the negative adverb niet 'not'*

In clauses with a neutral intonation pattern, the negative adverb *niet* 'not' expressing sentential negation normally cannot be followed by a direct object. Since *niet* can be followed by other types of constituents, like the PP-complement *op zijn vader* in (62b), we cannot account for the fact that the noun phrase *het boek* must precede the negation by assuming that the negative adverb *niet* and the verb are somehow conflated; the fact that the PP-complement follows the negative adverb suggests that the latter is external to the VP. If so, we must conclude that nominal objects must be scrambled to a position in front of the negative adverb.

- (62) a. Jan heeft <het boek> niet <\*het boek> gelezen.  
 Jan has the book not read  
 'Jan didn't read the book.'
- b. Jan heeft waarschijnlijk niet op zijn vader gewacht.  
 Jan has probably not for his father waited  
 'Probably, Jan didn't wait for his father.'

Example (63a) shows that indefinite nominal objects can normally neither precede nor follow the negative adverb; rather, they require that sentential negation be expressed by means of the negative article *geen* 'no', as in (63b). Note that the examples in (63a) are acceptable when *een* is stressed, in which case we are probably dealing with the numeral *één* 'one'; see 8.1.3.1, sub III, for similar data with clause adverbs. The example with the nominal object preceding the negative adverb then receives a specific interpretation, and the one with the nominal object following the negative adverb receives a "not a single" reading. For a more extensive discussion of the negative article *geen* and data of this sort, see Section 5.1.5.

- (63) a. Jan heeft <<sup>??</sup>een boek> niet <\*een boek> gelezen.  
 Jan has a book not read  
 b. Jan heeft geen boek gelezen.  
 Jan has no book read  
 'Jan hasn't read a book.'

An exception to the rule that indefinite nominal objects cannot precede the negative adverb *niet* are indefinite noun phrases containing an attributive adjective like *volgende* 'next' or *nieuwe* 'new' or an ordinal numeral, as in the examples in (64). Indefinite noun phrases of this type are also exceptional in that they can precede modal adverbs like *waarschijnlijk* 'probably'; cf. example (37). Note that the indefinite nominal object cannot follow the negative adverb *niet*, which is of course in accordance with the general rule that noun phrases cannot follow a negative adverb. The negative article *geen* 'no' cannot be used in examples of this kind.

- (64) a. Jan zal een volgende/nieuwe uitnodiging niet afslaan.  
 Jan will a next/new invitation not turn.down  
 'Jan won't turn down any invitation that comes next/new invitation.'  
 a'. \*Jan zal niet een volgende/nieuwe uitnodiging afslaan.  
 b. De Veiligheidsraad zal een nieuwe/tweede aanval niet veroordelen.  
 the Security Council will a new/second attack not condemn  
 'The Security Council will not condemn a subsequent/second attack.'  
 b. \*De Veiligheidsraad zal niet een nieuwe/tweede aanval veroordelen.

From the discussion above we can conclude that the negative adverb *niet* cannot be followed by a noun phrase. Note, however, that (65a), where the nominal object is assigned contrastive focus, is acceptable; in this case we are not dealing with sentential negation but with constituent negation, which is clear from the fact that the negative adverb is preferably pied piped by topicalization of the noun phrase. This example therefore does not conflict with the general rule that noun phrases cannot follow sentential negation.

- (65) a. Hij heeft niet het/een BOEK gelezen (maar het/een ARTIKEL).  
 he has not the/a book read, but the/an article  
 'He didn't read the BOOK (but the ARTICLE).'  
 b. <Niet> het/een BOEK heeft hij <<sup>?</sup>niet> gelezen (maar het/een ARTIKEL).

This may be different in the case of (66), where it is not simply the object *het boek* that is contrasted but the whole VP *het boek gelezen*. In this case, the negative adverb is preferably stranded by topicalization of the VP, although pied piping is at least marginally possible. If this indicates that we are dealing with sentential negation, example (65b) must be seen as an exception to the general rule that noun phrases cannot follow sentential negation.

- (66) a. Hij heeft niet [<sub>VP</sub> het/een BOEK gelezen] (maar [<sub>VP</sub> de/een FILM gezien]).  
 he has not the/a book read but the/a movie seen  
 'He didn't read the book, but saw the film.'  
 b. <<sup>?</sup>Niet> [<sub>VP</sub> het/een boek gelezen] heeft hij <niet> (maar [<sub>VP</sub> de/een film gezien]).

It is not easy to decide whether indefinite nominal objects preceding sentential negation allow a nonspecific interpretation or not. Although the noun phrase *vier boeken* can be placed either before or after the clause adverb *waarschijnlijk*, a nonspecific interpretation is not readily obtained. Rather, the nominal object following *waarschijnlijk* seems to be interpreted specifically (and the one preceding it seems to prefer a partitive reading). It seems that the quantifier *iemand* ‘someone’ in (67b) also receives a specific interpretation in both positions, although the judgments seem a bit murky in this case.

- (67) a. Jan heeft <vier boeken> waarschijnlijk <vier boeken> niet gelezen.  
 Jan has four books probably not read  
 b. Jan heeft <iemand> waarschijnlijk <?iemand> niet gezien.  
 Jan has someone probably not seen

A clearer picture arises in the case of the adverbs of frequency. In (68a), the nominal object precedes the adverbial phrase, and therefore we are clearly dealing with a specific indefinite noun phrase. As we have seen in Section 8.1.3.1, sub III, indefinite nominal objects following adverbs of frequency must be given a nonspecific interpretation. The fact that example (68b) is marked therefore suggests that indefinite nominal objects preceding the negative adverb *niet* cannot readily receive a nonspecific interpretation. For completeness’ sake, (68c) shows that, in accordance with our earlier observation, the indefinite nominal object cannot follow the negative adverb *niet* either.

- (68) a. Jan heeft twee boeken al drie keer niet kunnen lenen.  
 Jan has two books already three times not can borrow  
 ‘Already three times Jan couldn’t borrow two books.’  
 b. ??Jan heeft al drie keer twee boeken niet kunnen lenen.  
 c. \* Jan heeft al drie keer niet twee boeken kunnen lenen.

It is not clear whether there is a syntactic reason for the fact that indefinite nominal objects preceding the negative adverb *niet* cannot readily be construed as nonspecific: since the negative adverb normally follows the clause adverb (cf. (62a)), there is no *a priori* reason to assume that scrambling of a nonspecific indefinite nominal object across it is blocked. It might just as well be the case that there are more pragmatic reasons to assume that nonspecific indefinite nominal objects cannot precede and, hence, fall outside the scope of negation: it simply does not seem very informative to claim about some unidentified entity that a certain proposition does not apply to it. Of course, it does make sense to have a nonspecific nominal object within the scope of negation, since that would amount to having a negative existential quantifier, as in the English example *I didn’t see a thing*. However, Dutch uses special negative forms in such cases: the negative article *geen* ‘no’, and the negative quantifiers *niets* ‘nothing’ and *niemand* ‘nobody’.

#### 8.1.3.5. Conclusion

This section has discussed scrambling of nominal objects and has shown that different types of noun phrases have different scrambling options: generally speaking, we can say that definite pronouns scramble more often than definite noun

phrases, which, in turn, scramble more often than indefinite noun phrases. Further, we have seen that the domains in which scrambling applies differ for the different types of noun phrases. Indefinite noun phrases can cross certain VP-adverbs but not clause adverbs; definite noun phrases may cross clause adverbs when they are part of the presupposition of the clause but cannot readily cross adverbs that precede these clause adverbs; definite pronouns, finally, must precede the clause adverbs as well as the adverbs preceding them.

In the literature, the fact that scrambling of nominal objects may involve different domains of application is not generally taken into account, with the result that the occurrence of a presuppositional definite noun phrase after *any* adverb is sometimes taken as counterevidence for the claim that such noun phrases must scramble; cf. De Hoop (2000/2003) and Van Bergen & De Swart (2010). The primeless examples in (69) suggest that this view is too simple: scrambling of the definite noun phrase can only be observed when a clause adverb like *waarschijnlijk* is present (or discourse particles like *maar*; cf. Zwart 2011). It therefore does not come as a surprise either that the primed examples in (69) allow two readings: one in which the definite noun phrase is part of the focus and one in which it is part of the presupposition of the clause.

- (69) a. Jan zal morgen <het boek> waarschijnlijk <het boek> lezen.  
 Jan will tomorrow the book probably read  
 'Jan will probably read the book tomorrow.'  
 a'. Jan zal morgen het boek lezen.  
 b. Jan zal thuis <het boek> waarschijnlijk <het boek> lezen.  
 Jan will at.home the book probably read  
 'Jan will probably read the book at home.'  
 b'. Jan zal thuis het boek lezen.

Although we cannot exclude beforehand the possibility that presuppositional definite noun phrases may fail to scramble under certain conditions, we believe that we can only gain a deeper insight in the factors involved when we first investigate more thoroughly the properties of the adverbs that may precede them. This is clearly a topic for future research.

#### 8.1.4. Subject noun phrases in the expletive construction

°Expletive constructions are typically used to introduce a new entity into the domain of discourse. Generally speaking, these constructions are only possible when the subject is an indefinite or °weak noun phrase; this is normally referred to as the DEFINITENESS EFFECT. This is illustrated in (70): whereas the expletive construction with the indefinite noun phrase *een man* in (70a) is perfect, the corresponding construction with the definite noun phrase *de man* in (70b) is ungrammatical.

- (70) a. Er staat een man voor de deur.  
 there stands a man in.front.of the door  
 b. \*Er staat de man voor de deur.  
 there stands the man in.front.of the door

It is, however, not correct to claim that definite noun phrases are categorically excluded in the expletive construction. When the expletive construction contains a definite subject that is explicitly marked as introducing a new “topic”, the result is acceptable. This marking typically involves the adjective *volgende* ‘following’, which is used to announce a list of “new” topics, as in (71a&b). Another option that seems to favor this construction is the adverb *nog* in (71b&b’). Note that examples like (71b’) are also possible with noun phrases introduced by the distal demonstrative pronoun, but not with the proximate one; this is discussed in Section 5.2.3.2.2, sub II.

- (71) a. Er waren de *volgende* gast sprekers op de conferentie: ...  
 there were the following invited.speakers at the conference
- b. .. en dan zijn er *nog* de *volgende* problemen: ten eerste, ...  
 .. and then are there still the following problems first  
 ‘.. and then we still have the following problems: first ...’
- b’. .. maar dan/nu is er ook *nog* het probleem van de afvalverwerking.  
 .. but then/now is there also still the problem of the waste disposal  
 ‘.. but then/now we still have the problem of waste disposal.’

It is generally assumed that the expletive *er* occupies the canonical subject position, and that the indefinite subject occupies some lower position in the clause, presumably its base-position within the VP. If so, the expletive construction is just another case (in addition to scrambling) that shows that indefinite noun phrases resist leftward movement within the middle field of the clause.

### 1. Specific/nonspecific readings

The indefinite noun phrase in an expletive construction can either be specific or nonspecific. The most plausible reading of (72a) is the one where the speaker is not able to identify the person in question, whereas the most plausible reading of (72b) is that at least the speaker is able to identify the person in question in discourse. These examples also show that the nonspecific indefinite noun phrase in (72a) must follow the adverb, that is, cannot be scrambled. The specific one in (72b), on the other hand, can more readily be placed in the position in front of the adverb, which indicates that it can at least marginally be scrambled. In the case of a quantifier like *iemand* ‘someone’ in (72c), scrambling is even the normal means to make the distinction between the two interpretations: when the quantifier follows the adverb, it is preferably construed as nonspecific, whereas it must be construed specifically when it precedes it.

- (72) a. Er is <\*een man> gisteren <een man> overreden.  
 there is a man yesterday run.over  
 ‘A man was run over yesterday.’
- b. Er is <?een broer van mij> gisteren <een broer van mij> overreden.  
 there is a brother of mine yesterday run.over
- c. Er is <iemand> gisteren <iemand> overreden.  
 there is someone yesterday run.over

The examples in (73) show that the nonspecific indefinite noun phrase is not commonly used without the expletive, whereas the specific one can be used without the expletive. For completeness' sake, note that we have put aside the fact that in some varieties of Dutch, examples like (73a) are also acceptable without the expletive; we are only discussing the varieties here that do not allow this.

- (73) a. Gisteren is \*(er) een man overreden.  
 b. Gisteren is (er) een broer van mij overreden.  
 c. Gisteren is (er) iemand overreden.

It must be noted, however, that the expletive is sensitive not only to the type of its subject, but also to the presence or absence of some presupposition in the clause; cf. Bennis (1986). Consider the examples in (74). In (74a) the adverbial phrase *voor mijn huis* follows the indefinite subject and is construed as part of the °focus of the clause: since there is no other presupposition, the expletive must be realized. However, when the adverbial phrase precedes the subject, it can (but need not) be construed as the presupposition of the clause; when it is, the expletive may be dropped.

- (74) a. Gisteren is \*(er) een man voor mijn huis overreden.  
 yesterday is there a man in.front.of my house run.over  
 'Yesterday, a man was run over in front of my house.'  
 b. Gisteren is (er) voor mijn huis een man overreden.

Something similar can be observed in (75). Although for some unknown reason (75a) is perhaps somewhat marked on a nonspecific interpretation of the subject, it seems that this reading does require the expletive to be present, which is consistent with the fact that the object is preferably interpreted as a nonspecific indefinite noun phrase. In (75b), which may again be somewhat marked on a nonspecific interpretation of the subject, the expletive can be readily left out; this is related to the fact that the definite object *het boek* can (but need not) be interpreted as part of the presupposition of the clause. In (75c), which readily allows a nonspecific interpretation of the subject, the expletive cannot be used, which is due to the fact that the object pronoun *het* must be construed as part of the presupposition of the clause; see Broekhuis (2007/2008) for more discussion.

- (75) a. dat ?(er) een man een boek gekocht heeft.  
 that there a man a book bought has  
 b. dat (?er) een man het boek gekocht heeft.  
 that there a man the book bought has  
 c. dat (\*er) een man het gekocht heeft.  
 that there a man it bought has

From the data in (73) to (75), we may conclude that, in the absence of a presupposition, the expletive must be realized when the subject is nonspecific. An exception must be made, however, for nonspecific indefinite noun phrases modified by certain attributive adjectives or restrictive relative clauses. The primed examples in (76) show that they can be placed in the regular subject position, that is, the position occupied by the expletive in the primeless examples. Probably, the

attributive adjective/relative clause makes the noun phrase sufficiently specific to occupy this position.

- (76) a. Daarna werd er nog een tachtig jaar oude man binnengelaten.  
 after.that was there PRT an eighty year old man prt.-admitted  
 a'. Daarna werd een tachtig jaar oude man nog binnengelaten.  
 b. Daarna werd er nog een man die te laat kwam binnengelaten.  
 after.that was there PRT a man who too late came prt.-admitted  
 b'. Daarna werd een man die te laat kwam nog binnengelaten.

The examples in (77) show that modified noun phrases are even preferably placed in the regular subject position when the clause contains sentential negation. Note that these examples must not be confused with examples like *Er is een tachtig jaar oude man niet goed geworden* 'An eighty year old man became unwell', where the negative adverb is construed with the adjectival predicate. In these cases we are probably dealing with constituent negation (*niet goed* 'not well'  $\approx$  *onwel* 'ill').

- (77) a. <sup>?</sup>Er werd een tachtig jaar oude man niet binnengelaten.  
 there was an eighty year old man not prt.-admitted  
 a'. Een tachtig jaar oude man werd niet binnengelaten.  
 b. <sup>??</sup>Er werd een man die te laat kwam niet binnengelaten.  
 there was a man who too late came not prt.-admitted  
 b'. Een man die te laat kwam, werd niet binnengelaten.

A second exception involves examples in which the head of the indefinite subject receives contrastive accent. So whereas an indefinite subject like *een man* in (78a) normally cannot occur without the expletive, it can when the noun *man* is contrastively stressed, as in (78a'). When the noun phrase contains a numeral or quantifier, as in (78b), the expletive may also be dropped when contrastive accent is assigned to the numeral/quantifier, although in this case the noun phrase is likely to receive a partitive reading; cf. De Hoop (1992).

- (78) a. <sup>\*?</sup>Een man is gearresteerd.  
 a man has.been arrested  
 a'. Een MAN is gearresteerd (niet een VROUW).  
 a man has.been arrested not a woman  
 b. Er zijn twee studenten gearresteerd.  
 there are two students arrested  
 'Two students are arrested.'  
 b'. TWEE studenten zijn gearresteerd (niet DRIE).  
 two students are arrested not three  
 'Two (of the) students are arrested.'

## II. Partitive/non-partitive readings

That nonspecific indefinite noun phrases are normally preferably introduced by an expletive is also clear from the fact that such noun phrases may invoke special semantics when they occur in the regular subject position. Consider the (a)-examples in (79). Example (79a) merely claims that some student was arrested.

When the indefinite noun phrase is placed in regular subject position, the indefinite article is preferably stressed so that we cannot immediately observe whether we are dealing with the article or the numeral *één* 'one'. The preferred reading of the primed example is a partitive one: it is claimed that a certain student from a contextually determined set of students was arrested — the interpretation of the indefinite noun phrase comes rather close to *één van de studenten* 'one of the students'; cf. Section 4.1.1.6.1. The (b)-examples in (79) show that the same phenomenon can be found in cases that unambiguously involve a numeral or a quantifier.

- (79) a. Er is gisteren een student gearresteerd.  
           there is yesterday a student arrested  
           'A student was arrested yesterday.'  
       a'. EÉN student is gisteren gearresteerd.  
       b. Er zijn gisteren twee/enkele studenten gearresteerd.  
           there were yesterday two/some students arrested  
           'Two/some students were arrested yesterday.'  
       b'. TWEE/ENKELE studenten zijn gisteren gearresteerd.  
           two/some students were yesterday arrested  
           'Two/some of the students were arrested yesterday.'

As we noted above, it cannot be immediately be observed whether we are dealing in (79a') with the indefinite article or the numeral *één* 'one'. The fact illustrated in (80) that the indefinite plural noun phrase *studenten* cannot occur in the regular subject position suggests the latter. This supports our earlier conclusion that unmodified nonspecific indefinite noun phrases normally cannot occur in regular subject position.

- (80) a. Er zijn gisteren [<sub>NP</sub> Ø studenten] gearresteerd.  
           there are yesterday students arrested  
           'Students were arrested yesterday.'  
       b. \*?<sub>[NP Ø Studenten]</sub> zijn gisteren gearresteerd.

### III. Generic/non-generic readings

A further difference between the expletive construction and the construction with the indefinite noun phrase in the regular subject position is that the noun phrase can never be interpreted generically in the former. Consider the examples in (81): the indefinite noun phrase in the expletive construction in (81a) cannot be interpreted generically, whereas example (81b) must be construed generically. The difference can be made clearer by putting the examples in the past tense: (81a') is still acceptable and expresses that it used to be the case that some hippo was lying in the water; (81b'), on the other hand, is weird since it suggests that hippos in general have changed their habit of normally lying in the water. Note that (81b') becomes acceptable on a specific or partitive interpretation when we stress *een*: it used to be the case that a certain hippo or one of the hippos was lying in the water.



- (81) a. Er ligt meestal een nijlpaard in het water.  
          there lies generally a hippopotamus in the water  
      a'. Er lag meestal een nijlpaard in het water.  
          there lay generally a hippopotamus in the water  
      b. Een nijlpaard ligt meestal in het water.  
          a hippopotamus lies generally in the water  
      b'. %Een nijlpaard lag meestal in het water.  
          a hippopotamus lay generally in the water

The examples in (82) show that the same pattern arises in the case of plural indefinite noun phrases. Again, the primed (b)-example is unacceptable due to non-syntactic factors, given that it suggests that hippos in general have changed their habit of normally lying in the water.

- (82) a. Er liggen meestal [<sub>NP</sub> Ø nijlpaarden] in het water.  
          there lie generally Ø hippopotami in the water  
      a'. Er lagen meestal [<sub>NP</sub> Ø nijlpaarden] in het water.  
          there lay generally Ø hippopotami in the water  
      b. [<sub>NP</sub> Ø Nijlpaarden] liggen meestal in het water.  
          Ø hippopotami lie generally in the water  
      b'. % [<sub>NP</sub> Ø Nijlpaarden] lagen meestal in het water.  
          Ø hippopotami lay generally in the water

Summarizing, we can say that (unmodified) nonspecific indefinite subjects introduced by the indefinite article *een*/Ø must normally be part of an expletive construction. Specific indefinite subjects, on the other hand, may either be part of an expletive construction or occupy the regular subject position. Indefinite subjects with a partitive or generic interpretation, finally, cannot occur in an expletive construction but must occupy the regular subject position.

(83) Filler of the regular subject position

|                                      | SUBJECT | EXPLETIVE |
|--------------------------------------|---------|-----------|
| NONSPECIFIC INDEFINITE SUBJECT       | —       | +         |
| SPECIFIC INDEFINITE SUBJECT          | +       | +         |
| PARTITIVE/GENERIC INDEFINITE SUBJECT | +       | —         |

To conclude this section on the expletive construction we want to mention that narratives pose an exception to the general rule that nonspecific indefinite noun phrases headed by an indefinite article do not occur in the regular subject position. A story might well begin as in (84), where the function of the noun phrase *een man* is clearly to introduce some new discourse entity without the implication that the speakers would be able to uniquely identify the intended referent. The sentence in (84) is acceptable only when the discourse is continued with a story about this person sitting in the waiting room.

- (84) Een man zit in de wachtkamer bij de dokter en ...  
      a man sits in the waiting room of the doctor and  
      ‘A man is sitting in the waiting room of the doctor, and ...’

## 8.2. Predicative use of the noun phrase

This section discusses the use of the noun phrase as a °complementive (predicative complement of the verb) in predicative constructions such as the copular and the *vinden* ‘consider’ construction. We will start by discussing the “normal” predicative use of noun phrases in 8.2.1. This is followed in 8.2.2 by a discussion of the more special behavior of noun phrases denoting professions/social functions. Section 8.2.3 concludes with a discussion of examples like *het/dat zijn aardige jongens* ‘It/That are nice boys’, which are special given that a singular neuter pronoun may function as °logical SUBJECT of a plural nominal predicate.

### 8.2.1. Nominal predicates

Nominal complementives can be divided into three types. In the first type, the nominal predicate and its logical SUBJECT are in a set/subset relation: the latter is argued to be part of the set denoted by the former. In this type the nominal predicate is typically preceded by an indefinite article (*een* or  $\emptyset$ ). In the second type, the nominal predicate and its SUBJECT are identified: the latter is claimed to be identical to the former. In this case the predicate can be preceded by a wider set of determiners, including the definite article *de/het* and demonstrative and possessive pronouns. In the third type the predicate is a bare noun phrase, that is, not preceded by a determiner at all. This type usually occurs with verbs that select a predicate introduced by *als* or *tot*; bare nominal predicates may sometimes also occur in copular or *vinden*-constructions, but since these cases exhibit various special properties, we will discuss them separately in Section 8.2.2.

- (85) a. Jan is een goede vriend van mij. [set/subset]  
           Jan is a good friend of mine  
       b. Jan is de directeur van deze school. [identificational]  
           Jan is the director of this school  
       c. Zij zullen Jan tot voorzitter benoemen. [als/tot + bare noun]  
           they will Jan to chairman appoint  
           ‘They will appoint Jan as chairman.’

#### I. The set/subset relation

In the copular construction and the *vinden*-construction, a nominal predicate denotes a non-singleton set and it is claimed that the SUBJECT of the predicate is part of this set. In the copular constructions in the (a)-examples in (86) the SUBJECT of the predicate is the subject of the clause, and in the *vinden*-constructions in the (b)-examples it is the accusative object of the clause. These examples also show that the nominal predicate and its SUBJECT agree in number. Example (86c) is added to show that, for some unknown reason, resultative constructions with a “truly” nominal predicate are not common; resultative verbs generally take a nominal predicate introduced by *als* or *tot*; cf. Subsection III below.

- (86) a. Jan is [PRED een aardige jongen].  
           Jan is a nice boy  
       a'. Jan en Peter zijn [PRED  $\emptyset$  aardige jongens].  
           Jan and Peter are nice boys

- b. Ik vind Peter [<sub>PRED</sub> een aardige jongen].  
 I consider Peter a nice boy
- b'. Ik vind Jan en Peter [<sub>PRED</sub> Ø aardige jongens].  
 I consider Jan and Peter nice boys
- c. Hij benoemde Jan \*(tot/als) voorzitter.  
 he appointed Jan as chairman

## II. The identification relation

The examples in (86) above illustrate the use of indefinite noun phrases as predicates. Definite noun phrases can be used in the same way. The main difference is that whereas the use of an indefinite noun phrase expresses that its SUBJECT is *part of* the denotation of the NP, the use of a definite noun phrase implies that the SUBJECT *exhausts* it. For example, (87a) expresses that Peter is just part of the set of students that are supervised by Marie, whereas (87b) implies that Peter is the only student that is supervised by Marie. The (b)-examples in (87) therefore differ from those in the (a)-examples in not expressing a set/subset relation, but an identification relation.

- (87) a. Peter is [<sub>PRED</sub> een student die door Marie begeleid wordt].  
 Peter is a student who by Marie supervised is
- a'. Peter en Jan zijn [<sub>PRED</sub> studenten die door Marie begeleid worden].  
 Peter and Jan are students who by Marie supervised are
- b. Peter is [<sub>PRED</sub> de student die door Marie begeleid wordt].  
 Peter is the student who by Marie supervised is
- b'. Peter en Jan zijn [<sub>PRED</sub> de studenten die door Marie begeleid worden].  
 Peter and Jan are the students who by Marie supervised are

That we are dealing with an identification relation does not mean, however, that both DPs are referring expressions. That this is not the case will become clear when we consider the referential behavior of the coordinated DPs in (88). The plural marking on the finite verb in (88a) shows that the coordinated subject *de dokter en de burgemeester* 'the physician and the mayor' is also necessarily plural. This shows that there is a one-to-one relation between the number of articles and the number of referents: each conjunct refers to a separate person. This is, however, not the case in (88b), where the coordinated DP functions as a predicate: there is simply one person who can be identified both as the physician and as the mayor of the village under discussion. Example (88b') shows that predicative definite noun phrases can also be coordinated by means of conjunctions other than *en* 'and'. Note that the adverbs *tevens* 'also' and *ook* 'also' in (88b&b') emphasize the fact that the persons denoted by the coordinated predicative noun phrases are actually the same; see also the discussion of the examples in (97) below.

- (88) a. De dokter en de burgemeester komen/\*komt morgen langs.  
 the physician and the mayor come/comes tomorrow prt.  
 'The physician and the mayor will visit us tomorrow.'
- b. Jan is de dokter en (tevens) de burgemeester van dit dorp.  
 Jan is the physician and also the mayor of this village
- b'. Jan is niet alleen de dokter maar ook de burgemeester van dit dorp.  
 Jan is not only the physician but also the mayor of this village

Examples like (88b&b') clearly show that definite nominal predicates do not refer to some entity in the domain of discourse; the function of the definite articles is to express that the sets denoted by the nominal predicates *dokter van dit dorp* and *burgemeester van dit dorp* have just one member. The construction as a whole expresses that the members of these two singleton sets are identical and can be identified with the referent of the subject of the clause, *Jan*. See Alexiadou et al. (2007: prt II, §2.3) for more discussion.

The examples in (89) show that, in constructions expressing an identification relation, it is often possible to interchange the positions of the two noun phrases. At first sight it is not clear what this tells us. It may be the case that the two word orders differ in underlying syntactic structure, that is, differ with respect to which noun phrase performs which syntactic function (subject or complementive). However, it may also be the case that the two orders have the same underlying syntactic structure but that one of the two is derived by topicalization, an option that can be argued for independently on the basis of examples like *Aardig is hij niet* 'Nice, he is not'.

- (89) a. Marie is de beste leerling van deze klas.  
 Marie is the best pupil of this group
- a'. De beste leerling van deze klas is Peter.
- b. Peter en Marie zijn de beste leerlingen van deze klas.  
 Peter and Marie are the best pupils of this group
- b'. De beste leerlingen van deze klas zijn Peter en Marie.

The option of having two different underlying structures seems to be refuted by the data in (90): if the proper noun(s) need not act as the subject but can also act as the predicate, the primed examples should be fully acceptable, which they are not. However, they are not as bad as one would expect: especially when the proper nouns are given emphatic accent, the result is reasonably acceptable, and it yields at least quite a contrast with examples like *\*dat aardig Jan niet is*, in which *aardig* is unequivocally a predicate.

- (90) a. dat Marie de beste leerling van deze klas is.  
 that Marie the best pupil of this group is
- a'. dat de beste leerling van deze klas PETER/?Peter is.
- b. dat Peter en Marie de beste leerlingen van deze klas zijn.  
 that Peter and Marie the best pupils of this group are
- b'. dat de beste leerlingen van deze klas PETER EN MARIE/?Peter en Marie zijn.

Another prediction would be that in the *vinden*-constructions the two noun phrases are also interchangeable. As can be seen in (91), however, there is a strong preference for the proper noun(s) to precede the definite noun phrase: the primed examples in (91) require heavy stress on the proper nouns, and even then the result is marginal at best. From this, it seems that we can safely conclude that the proper noun acts as the SUBJECT and the definite noun phrase acts as the predicate in these examples.

- (91) a. dat ik Marie de beste leerling van deze klas vind.  
           that I Marie the best pupil of this group consider  
           ‘that I consider Marie the best pupil of this group.’  
       a’. \*dat ik de beste leerling van deze klas Marie vind.  
       b. dat ik Peter en Marie de beste leerlingen van deze klas vind.  
           that I Peter and Marie the best pupils of this group consider  
           ‘that I consider Peter and Marie the best pupils of this group.’  
       b’. \*Ik de beste leerlingen van deze klas Peter en Marie vind.

Note in passing that the test in (91) is only available when the nominal predicate is evaluative; when it expresses an objective property, the *vinden*-construction always gives rise to an unacceptable result. This is illustrated in the (b)-examples of (92).

- (92) a. Peter is de (beste) voorzitter van de vereniging (ooit).  
           Peter is the best chairman of the association ever  
       b. Ik vind Peter de \*(beste) voorzitter van de vereniging.  
           I consider Peter the best chairman of the association  
       b’. \*Ik vind de (beste) voorzitter van de vereniging Peter.

That the definite noun phrase functions as the complementive can also be supported by the fact that when the clause contains a first or second person personal pronoun, the verb must agree with the pronoun: the copula verb in the examples in (93) must be the second person form *ben(t)* ‘are’ and cannot be the third person form *is* ‘is’. Similar facts concerning number agreement can be found in (94).

- (93) a. Jij bent/\*is de beste leerling van deze klas.  
           you are/is the best pupil of this group  
       b. De beste leerling van de klas ben/\*is jij.  
           the best pupil of the group are/is you
- (94) a. De kinderen zijn/\*is het grootste probleem.  
           the children are/is the biggest problem  
           ‘The children are the biggest problem.’  
       b. Het grootste probleem zijn/\*is de kinderen.  
           the biggest problem are/is the children  
           ‘The biggest problem is the children.’

Note in passing that the agreement facts in Dutch crucially differ from the corresponding ones in English. For example, in English, inversion of the subject and the predicate will result in verb agreement with the preposed predicate, as will be clear from the rendering of example (94b). Furthermore, the subject pronoun will

surface as an object form: cf. *De beste kandidaat ben ik/\*mij* vs. *The best candidate is me/\*I*. Since this is not the place to discuss these differences between English and Dutch, we refer the reader to Den Dikken (2006: Ch.4, fn.43), who argues that these differences are related to the fact that predicate inversion may result from topicalization in Dutch, but not in English.

The discussion above has shown that even in predicative constructions expressing identity, there can be a fixed division of labor between the two noun phrases. This leads to the question what determines whether a certain noun phrase acts as the SUBJECT or the predicate. Just as in the case of regular predicative constructions, this seems to be related to inclusion relations. Whereas proper nouns normally refer to some specific entity in the domain of discourse, the referents of definite noun phrases are primarily presented as members of a larger set denoted by the NP. For example, the definite noun phrase *de beste leerling van de klas* 'the best pupil(s) of the group' does not simply refer to a certain individual, but to an individual who is characterized as being a member of a larger subset denoted by the NP *leerling van deze klas* 'pupil of this group'. The facts reviewed above suggest that it is always the noun phrase presented as part of a larger superset that is taken as the predicative part of the construction.

In fact, it seems that this can be made even more precise. The examples in (95), which involve two definite noun phrases, suggest that it is the noun phrase presented as part of *the largest superset* that is taken as the complementive. In the most plausible extra-linguistic context to utter the primeless examples in (95), the set of tulips will be considerably smaller than the total set of flowers exhibited at the exhibition, and the primed examples unambiguously show that, as a result of this, it is the noun phrase *de mooiste bloem van deze tentoonstelling* that functions as the complementive, given that example (95b') is at best marginally acceptable with strong emphatic accent on the noun phrase *deze blauwe tulp*.

- (95) a. *Deze blauwe tulp is de mooiste bloem van deze tentoonstelling.*  
           this blue tulip      is the most.beautiful flower of this exhibition  
       a'. *Ik vind        deze blauwe tulp de mooiste bloem van deze tentoonstelling.*  
           I    consider    this blue tulip    the most.beautiful flower of this exhibition  
       b. *De mooiste bloem van deze tentoonstelling is deze blauwe tulp.*  
       b'. <sup>\*?</sup>*Ik vind de mooiste bloem van deze tentoonstelling deze blauwe tulp.*

Of course, there are still many cases where it is not so clear which of the two noun phrases must be considered the predicate of the construction. This is illustrated by the examples in (96). The embedded clauses show that the two definite noun phrases may both act as the predicate of the copular construction. The difference between (96a') and (96b') is that in the former the noun phrase *de voorzitter van deze vergadering* is taken to be a referential expression, the referent of which is known to both the speaker and the addressee, whereas in the latter it is taken to be a property assigned to the referent of the referential noun phrase *de decaan van de universiteit*. This shows that the assignment of referential or predicative status may be dependent on properties of the discourse; in (96a'), the referent of the noun phrase *de voorzitter van deze vergadering* is assumed to be known to the addressee, whereas the referent of *de decaan van de universiteit* is not:

it is the purpose of the sentence to express that the two noun phrases have the same referent.

- (96) a. De voorzitter van deze vergadering is de decaan van de faculteit.  
           the chairman of this meeting           is the dean of the faculty  
       a'. dat de voorzitter van deze vergadering de decaan van de faculteit is.  
           that the chairman of this meeting           the dean of the faculty is  
       b. De decaan van de faculteit is de voorzitter van deze vergadering.  
       b'. dat de decaan van de faculteit de voorzitter van deze vergadering is.

The primeless examples in (96) are semantically ambiguous, but the two interpretations are generally associated with two different intonation patterns. When the sentences are interpreted with the first noun phrase as a referential expression, it can be pronounced with a neutral, continuous intonation contour. On the alternative, inverse interpretation, some special intonational clue is needed, for example by inserting a brief intonation stop before the second noun phrase, and/or by placing emphatic or contrastive focus on it. The alternative, inverse interpretation can also be blocked by means of adverbs like *ook* 'also' or *tevens* 'also': in examples like (97) the second noun phrase must be construed as the predicate.

- (97) a. De voorzitter van deze vergadering is ook de decaan van de faculteit.  
           the chairman of this meeting<sub>SUBJECT</sub> is also the dean of the faculty<sub>Pred</sub>  
       b. De decaan van de universiteit is tevens de voorzitter van deze vergadering.  
           the dean of the faculty<sub>SUBJECT</sub> is also the chairman of this meeting<sub>Pred</sub>

### III. Nominal predicates introduced by *als*/*tot*

In some cases, the nominal predicate must be introduced by *als* or *tot*, or, less commonly, *voor*. In some cases this seems to be an idiosyncratic property, given that verbs like *beschouwen* 'to consider' and *benoemen* 'to appoint' obligatorily take such a predicate: in (98a), the *als*-phrase cannot be dropped without shifting the meaning of the verb to something like "to observe"; in (98b), the *tot/als*-phrase can be dropped, but will then be implied.

- (98) a. Ik beschouw Jan <sup>#</sup>(als een veelbelovende student).  
           I consider Jan as a promising student  
           'I consider Jan a promising student.'  
       b. We benoemen Jan morgen (tot/als voorzitter).  
           we appoint Jan tomorrow as chairman

There are also some more or less fixed collocations with the verb *houden* and the preposition *voor*. Some examples are given in (99); in the (a)-example *voor* is followed by a noun phrase and in the (b)-example by an adjective.

- (99) a. Ze hielden hem voor de dader.  
           they consider him FOR the perpetrator  
       b. Je zult het niet voor mogelijk houden, maar ...  
           you will it not FOR possible consider but  
           'You won't believe it, but ...'

Using a nominal predicate introduced by *tot* is the normal way of expressing a result. Whereas bare adjectival predicates like *boos* or *dood* can be used in all kinds of resultative constructions, the option of using a bare nominal predicate seems to be restricted to the verb *maken*.

- (100) a. Ik maak Peter boos.  
           I make Peter angry  
       a'. Jan sloeg de mug dood.  
           Jan hit the mosquito dead  
       b. We maken Peter het hoofd van de afdeling.  
           we make Peter the head of the department  
       b'. We slaan Peter tot ridder.  
           we hit Peter to knight  
           'We knight Peter.'

We must add immediately that, in accordance to what we have already observed with respect to the examples in (98), many cases of the sort in (100b') seem to be lexically restricted. An example like (101a) is unacceptable, despite the fact that it seems to make perfect sense semantically; cf. the acceptability of (101b) with the adjectival complementive *fit*.

- (101) a. Marie zwom zich \*<sup>(?)</sup>tot wereldkampioen op de honderd meter schoolslag.  
           Marie swam REFL to world.champion on the hundred meter breaststroke  
       b. Marie zwom zich fit  
           Marie swam REFL fit  
           'Jan swam herself fit.'

All of the examples discussed above involve a set/subset relation. The predicative *als*-phrase can, however, also be used to express an identity relation, in which case the noun phrase is typically definite.

- (102) a. Ik beschouw Jan als de beste leerling in jaren.  
           I consider Jan as the best pupil in years  
           'I consider Jan the best pupil in years.'  
       b. Ik beschouw Jan als de aanstichter van de rel.  
           I consider Jan as the instigator of the riot

Finally, example (103) shows that noun phrases introduced by *als* can also be used as °supplementives. Note that the noun phrase in this example does not contain an article, just like the noun phrase in (98b). This is a typical property of predicatively used nouns denoting a profession or social function; we will discuss this extensively in Section 8.2.2, where we will also discuss examples like (103) in more detail.

- (103) Als student werkte Marie in het ziekenhuis.  
       as student worked Marie in the hospital  
       'As a student, Marie worked in the hospital.'



8.2.2. *Noun phrases denoting a profession or social function*

Predicative nouns denoting a profession or social function are unique in that we find a three-way alternation between noun phrases headed by a definite article, noun phrases headed by an indefinite article and bare noun phrases. The use of “↗” in (104a) indicates that the bare noun phrase involves a rise in the intonation contour, which, in neutral contexts, is lacking in the other two cases. That the choice of determiner is not semantically innocuous will be evident from the general survey below; see also Haeseryn et al. (1997: §4.5.6).

- (104) a. Hij is ↗ dokter. [bare NP]  
           he is physician  
           ‘He is a physician (by profession).’  
       b. Hij is de dokter. [definite article]  
           he is the physician  
           ‘He is the physician.’  
       c. Hij is een dokter. [indefinite article]  
           he is a physician  
           ‘He behaves like/has features typical of a physician.’

I. *No article → function/profession*

The interpretation of *dokter* ‘doctor’ in (104a) is that of the profession/social function; it predicates the property of being a doctor by profession of the subject. The nominal predicate receives what we will call a “professional” reading and is interpreted “objectively”. This objective interpretation is clear from the fact that bare NPs cannot enter the *vinden*-construction in (105a), which inherently expresses a subjective evaluation by the referent of the subject of the clause. Further, it is clear from the fact illustrated in (105b) that subjective modifiers cannot be added to the bare noun phrase. Finally, the predicative noun cannot have an inherently positive or negative connotation, as is the case with *schoolfrik* in (105c).

- (105) a. \*Ik vind hem schoolmeester.  
           I consider him schoolmaster  
       b. \*Jan is goede schoolmeester.  
           Jan is good schoolmaster  
       c. \*Jan is schoolfrik.  
           Jan is pedant.schoolmaster

This places the bare NP apart from the predicatively used noun phrases introduced by the indefinite article *een* ‘a’ in (106), which may but need not denote the profession of being a schoolmaster; cf. the discussion in Subsection III below.

- (106) a. Ik vind hem een schoolmeester.  
           I consider him a schoolmaster  
       b. Jan is een goede schoolmeester.  
           Jan is a good schoolmaster  
       c. Jan is een schoolfrik.  
           Jan is a pedant.schoolmaster

Note that this semantic distinction between bare NPs and indefinite noun phrases introduced by the article *een* is typical for the domain of nominal predicates, and does not occur elsewhere. For instance, the examples in (107) show that the preposition *zonder* ‘without’ can take either a bare noun phrase or an indefinite noun phrase as its complement, but it seems difficult to discern any describable semantic difference between the two examples. Note that evaluative modifiers can be used in both cases, and that the noun may express an inherently subjective connotation such as *pillendraaier* (lit.: someone who makes pills).

- (107) a. We kunnen niet op safari zonder (goede) dokter/pillendraaier.  
           we can not on safari without good physician  
       b. We kunnen niet op safari zonder *een* (goede) dokter/pillendraaier.  
           we can not on safari without a good physician  
           ‘We cannot go on a safari without a (good) physician.’

As was already mentioned in 8.2.1, sub III, predicative bare noun phrases can also be used on their “professional” reading in phrases introduced by *als*, *tot*, and occasionally *voor*. On this reading, the noun phrase must be bare, that is, it cannot be introduced by the indefinite article *een*.

- (108) a. Jan werkt als (\*een) dokter in een ziekenhuis.  
           Jan works as a physician in a hospital  
           ‘Jan is practicing his profession as a physician in a hospital.’  
       b. Als (\*een) dokter komt Jan vaak bij de mensen thuis.  
           as a physician comes Jan often with the people at home  
           ‘In his capacity of physician, Jan visits a lot of people at home.’  
       c. Jan is benoemd tot/als (\*een) hoogleraar in de taalkunde.  
           Jan is appointed as a professor in the linguistics  
           ‘Jan is appointed as professor in linguistics.’  
       d. Jan studeert voor (\*een) leraar.  
           Jan studies for a teacher  
           ‘Jan is studying to become a teacher.’

This does not mean that examples like (109a’) are ungrammatical. However, when an indefinite article is present, the noun phrase loses its “profession” reading, and the example can only be used in a metaphorical sense: example (109a’) means that Jan drives very fast. This metaphorical use of *als*-phrases is very productive, but always involves a noun phrase introduced by an indefinite article; cf. (109b&c).

- (109) a. Jan rijdt als autocoureur (voor Porsche).  
           Jan drives as a racing.driver for Porsche  
           ‘Jan is employed (by Porsche) as a racing driver.’  
       a’. Jan rijdt als een autocoureur.  
           Jan drives like a racing.driver  
       b. Jan hijgt als \*(een) werkpaard.  
           Jan pants like a workhorse  
       c. Jan rookt als \*(een) schoorsteen.  
           Jan smokes like a chimney

All examples so far involve nouns denoting [+HUMAN] entities. It is therefore useful to show that inanimate noun phrases can sometimes also be used in article-less constructions, both in the copular construction and as the complement of *als*. This is illustrated in (110).

- (110) a. Dit zinsdeel is (het) onderwerp van de zin.  
           this constituent is the subject of the clause  
       b. Dit zinsdeel fungeert als (het) onderwerp van de zin.  
           this constituent functions as the subject of the clause

## II. Definite article → uniqueness in context

Like its article-less counterpart, the definite nominal predicate in (104b), *Hij is de dokter* 'He is the physician', has the objective "professional" reading as a profession or social function. As usual, the semantic contribution of the definite article is that of uniqueness in the domain of discourse; example (104b) can be used in contexts in which there is an implicit institution or social unit (say, a neighborhood or a hospital) in which the referent of the subject can be uniquely identified by means of the nominal predicate: "He is the doctor in this village". Examples like these are usable also in a play-script kind of context: "He is the actor that plays the doctor in this play". The definite article is obligatory when the noun phrase contains a superlative or some other element that implies that the noun phrase has unique reference.

- (111) a. Jan is de/\*een/\*Ø knapste dokter.  
           Jan is the/a/Ø most.handsome/skilled physician  
           'Jan is the most handsome/skilled physician.'  
       b. Jan was de/\*een/\*Ø eerste dokter  
           Jan was the/a/Ø first physician

## III. Indefinite article een → subjective and/or characteristic

No statement about the professional occupation of the subject need be implied by the indefinite nominal predicate in (104c), *Hij is een dokter* 'He is a physician'. In this example, the predicate can also be interpreted subjectively and express that, in the eyes of the speaker, the subject *behaves like* a doctor or shows features in his behavior which typify doctors (e.g., wearing a white coat all the time, or using lots of Latinate medical terms). The difference can be made clearer by considering example (112), which involves the verb *lijken* 'to seem', and in which the modal particle *wel* emphasizes the fact that the addressee is not really a schoolmaster but only resembles one.

- (112) Je lijkt wel \*(een) schoolmeester als je zo praat.  
           you seem PRT a schoolmaster when you like.that talk  
           'You resemble a schoolmaster when you talk like that.'

That nominal predicates preceded by an indefinite article may be of an inherent subjective/evaluative or metaphorical nature is also supported by the fact that examples like (113a) can be used as an insult comparable to the one in (113b). Interestingly, the primeless examples alternate with the constructions in the primed

examples, which feature a bare noun phrase that acts as the antecedent of relative pronoun that functions as a predicate in the relative clause.

- (113) a. Je bent een vervelende schoolmeester!  
           you are a tedious schoolmaster  
       a'. Vervelende schoolmeester, die/dat je bent!  
           tedious schoolmaster that you are  
       b. Je bent een grote klootzak!  
           you are a big scrotum  
           'You are a big bastard!'  
       b'. Grote klootzak die/dat je bent!  
           big scrotum that you are

The primed examples pose several questions. First, it is unclear why the bare noun phrase does not receive the objective, professional reading discussed in Subsection I. Second, it is not clear why the bare noun phrase can function as the antecedent of the relative clause given that the indefinite article in the primeless examples is obligatory. Third, it is not clear why the relative pronoun can be *die*, which normally cannot function as the predicate of a relative clause. Finally, the relative clause is omissible. We will not attempt to address these questions here, but leave them to future research.

The interpretation of a nominal predicate that is part of a supplementive *als*-phrase also depends on the presence or absence of the indefinite article; cf. Van den Torn (1981: 50). In (114a), the bare NP must be construed under the "profession" reading, whereas (114a') instead expresses that Jan's talking resembles the speech of a vicar; see also the discussion of example (109). Example (114b) expresses that Marie lived in lodgings when she was a student, whereas (114b') just compares Marie's mode of housing to that of a student.

- (114) a. Jan spreekt als dominee.  
           Jan speaks as vicar  
           'Jan speaks in his capacity of vicar.'  
       a'. Jan spreekt als een dominee.  
           Jan speaks as a vicar  
           'Jan talks like a vicar.'  
       b. Als student woonde Marie op kamers.  
           as student lived Marie on rooms  
           'As a student Marie lived in lodgings.'  
       b'. Als een student woonde Marie op kamers.  
           as a student lived Marie on rooms  
           'Like a student Marie lived in lodgings.'

To conclude this subsection, it might be interesting to point out that the interpretation of the definite genitival nominal predicate in (115a) comes relatively close to examples with an indefinite noun phrase in that it denotes a set of typical properties of a certain real-world entity. It is different, however, in that it need not denote a profession and requires that the subject be a noun phrase denoting certain behavior (or a pronoun that takes such a noun phrase as its antecedent). By far the

most conspicuous feature is the “mock archaic” use of genitive case: the genitive determiner *des*, which was originally the masculine or neuter article, is now also used with feminine/plural noun phrases, as in (115b&c), and with proper nouns like *Ajax*, as in (115d). For more discussion and representative examples, see [www.onzetaal.nl/taaladvies/advies/des-vrouws](http://www.onzetaal.nl/taaladvies/advies/des-vrouws) and, especially, Hoeksema (1998).

- (115) a. Dat is *des* kinds.  
that is the child<sub>gen</sub>  
‘That’s how children are.’
- b. Ontrouw is *des* vrouw/des mensen(s).  
infidelity is the<sub>masc,gen</sub> woman<sub>gen</sub>/person  
‘Infidelity is a typical female trait.’
- c. IJdelheid is *des* vrouws/des mensen(s).  
vanity is the<sub>masc,gen</sub> woman<sub>gen</sub>/person  
‘Vanity is a typical human trait.’
- d. Verdedigen is niet *des* Ajax.  
to defend is not the<sub>masc,gen</sub> Ajax  
‘A defensive attitude is not typical for Ajax.’

#### IV. Differences between the three types of nominal predicates

There are a number of ways in which the three types of nominal predicates discussed in the previous subsections exhibit different syntactic behaviors, which are related to their semantic properties. Here we will discuss some without claiming that we are discussing the differences exhaustively.

##### A. Modification of the predicate by means of the PP *van beroep* ‘by profession’

To bare *dokter* in (104a) can readily be added *van beroep* ‘by profession’, as seen in (116a), whereas it is impossible to add *van beroep* to the nominal predicates in (104b&c). This suggests that only (104a) inherently expresses an occupation.

- (116) a. Jan is dokter van beroep.  
Jan is physician by profession
- b. \*Jan is de dokter van beroep.  
Jan is the physician by profession
- c. \*Jan is een dokter van beroep.  
Jan is a physician by profession

##### B. The nominal predicate as SUBJECT of a nominal predicate headed by *beroep*

The (a)-examples in (117) show that a bare nominal predicate can also be used as the logical SUBJECT of a °second order predicate headed by *beroep* ‘profession’. It is impossible, however, to use nominal predicates preceded by a definite or indefinite article as the SUBJECT of such a predicate; cf. examples (117b&c). Again, this suggests that only bare nouns inherently express an occupation.

- (117) a. Dokter is een mooi beroep.  
physician is a nice profession
- a’. Ik vind dokter een mooi beroep.  
I consider physician a nice profession

- b. \*De dokter is een mooi beroep.  
the physician is a nice profession
- c. \*Een dokter is een mooi beroep.  
a physician is a nice profession

### C. Pluralization

The examples in (86) have shown that nominal predicates and the noun phrases they are predicated of normally agree in number. The examples in (118b&c) show that this also holds for the indefinite and definite predicative noun phrases in (104b&c). Example (118a), however, shows that the bare noun phrase in (104a) does not exhibit plural morphology when its SUBJECT is plural.

- (118) a. Zij zijn  $\nrightarrow$  dokter. [bare NP]  
they are physicians  
'They are physicians (by profession).'
- b. Zij zijn de doktoren. [definite article]  
they are the physicians  
'They are the physicians.'
- c. Zij zijn  $\emptyset$  doktoren. [indefinite article]  
they are physicians  
'They behave like/have features typical of real physicians.'

One problem, however, is that we cannot be absolutely sure whether number agreement is impossible with bare nominal predicates. This is due to the fact that the plural indefinite article is phonetically empty, so that the only difference between (118a) and (118c) is the rising intonation contour in the former. Fortunately, the earlier findings in (116) and (117) can be used as additional support for the conclusion that the bare noun phrase cannot be plural. As we have seen in (116), the bare noun phrase *dokter*, but not the indefinite noun phrase *een dokter*, can be modified by the PP *van beroep*. As is shown in (119a), the plural noun phrase *doktoren* cannot be modified by this PP either, so we may conclude that the plural noun phrase contains the indefinite zero article  $\emptyset$ . Similarly, we have seen that the bare noun phrase *dokter*, but not the indefinite noun phrase *een dokter*, can be used as the SUBJECT of a nominal predicate headed by *beroep* 'profession'. Since the plural noun phrase *doktoren* cannot be used in (119b), we must again conclude that the plural noun phrase contains the article  $\emptyset$ . From, this we can safely conclude that the bare noun phrase *dokter* does not have a plural counterpart.

- (119) a. Zij zijn dokter<sup>??</sup> doktoren van beroep.  
they are physician(s) by profession
- b. \*Doktoren is/zijn een mooi beroep.  
physicians is/are a nice profession

### D. Modifiers

The examples in (120a) show that the bare noun phrase *dokter* cannot be modified by the adjective *echt* 'real/true', whereas this is possible in the other two examples. In (120b), *echte* is used to distinguish the genuine doctor from the quacks surrounding him. The semantic import of *echte* in (120c) depends on whether accent

is assigned to the adjective or to the noun. In the first case, the semantic contribution of *echt* is similar to *echt* in (120b): Jan is not a quack. In the latter case, it enhances the “subjective” interpretation of the predicative noun phrase: Jan truly behaves like a doctor.

- (120) a. \*Jan is echte dokter.  
           Jan is real physician  
       b. Jan is de echte dokter.  
           Jan is the real physician  
           ‘Jan is the real physician (and not one of the quacks).’  
       c. Jan is een echte dokter.  
           Jan is a real physician  
           ‘Jan really is a true doctor/behaves like a true physician.’

The ungrammaticality of (120a) seems to confirm our earlier conclusion drawn from the examples in (105) that bare nominal predicates have an “objective” interpretation. In order to maintain this conclusion, we must show, however, that the ungrammaticality of (120a) is not the result of some general restriction on modification of bare nominal predicates, but results from the fact that the bare noun phrase resists only modification of a certain type. That there is a selective restriction on modification is clear from the difference in grammaticality between (121) and (122). The difference lies in the semantic contribution made by the modifiers in question; modification of the TYPE denoted by the predicate nominal is possible, whereas modification of specific TOKENS who have this function is not. It must be noted, however, that the collocations in (122) border on compounding.

- (121) a. Jan is dokter       (\*met grote vakkennis).  
           Jan is physician with great professional knowledge  
       b. Jan is dokter       (\*die goed voor zijn patiënten zorgt).  
           Jan is physician who well for his patients cares  
       (122) a. Jan is gediplomeerd   dokter.  
           Jan is diploma.bearing physician  
       b. Jan is doctor in de medische wetenschappen.  
           Jan is doctor in the medical sciences

### *E. Placement*

Complementives are normally placed left-adjacent to the verbs in clause-final position, and cannot be scrambled to the left of clause adverbs like *waarschijnlijk* ‘probably’ or *natuurlijk* ‘of course’. This also holds for the predicative noun phrases in (123a&c), which cannot occur in any other position in the middle field of the clause than the one indicated.

- (123) a. dat hij <\*leraar> waarschijnlijk <leraar> wordt.  
           that he teacher probably become  
           ‘that he will probably become a teacher.’  
       b. dat hij <\*de leraar> waarschijnlijk <de leraar> is.  
           that he the teacher probably is  
           ‘that he probably is the teacher.’

- c. dat hij <\*een schoolfrik> natuurlijk <een schoolfrik> is.  
 that he a pedant.schoolmaster of course is  
 'that he of course behaves like a pedant schoolmaster.'

It seems, however, that the definite noun phrases behave differently with respect to the negative adverb *niet*: whereas, e.g., adjectival complementives must follow this adverb, as shown in (124a), the (b)-examples in (124) show that definite predicative noun phrases may occur on either side of it. The interpretation is similar to that with direct objects: when the noun phrase follows *niet*, we are dealing with constituent negation; when the noun phrase precedes *niet*, we are dealing with sentential negation.

- (124) a. dat Jan <\*aardig> niet <aardig> is.  
 that Jan nice not is  
 b. dat Jan niet de DIRECTEUR is (maar de EIGENAAR).  
 that Jan not the director is but the owner  
 b'. dat Jan de directeur niet is.  
 that Jan the director not is  
 'that Jan isn't the manager.'

It is less clear whether the placement of definite predicative noun phrases is also more free with other adverbs that normally follow the clause adverbs: placement of the definite predicative noun phrase in (125b) in front of *al* 'already' gives rise to a much better result than movement of the nominal predicate in (125a&c), but it still seems marked compared to its placement left-adjacent to the verb cluster.

- (125) a. Jan heeft altijd <\*directeur> al <directeur> willen zijn.  
 Jan has always director already want be  
 b. Jan heeft altijd <?de directeur> al <de directeur> willen zijn.  
 Jan has always the director already want be  
 c. Jan heeft altijd <\*een directeur> al <een directeur> willen zijn.  
 Jan has always a director already want be

### 8.2.3. Copular constructions with a singular neuter pronoun as subject

This section concludes the discussion of nominal complementives with a look at of copular constructions like (126), which have given rise to a debate about whether the neuter pronoun *het/dat/dit* or the noun phrase *aardige jongens* functions as subject of the construction. In our discussion below, we will use examples headed by the copula *zijn* 'to be', but such constructions also occur with other copulas like *worden* 'become' or *blijven* 'to stay'.

- (126) a. Het is een aardige jongen. a'. Het zijn aardige jongens.  
 it is a nice boy it are nice boys  
 b. Dat/Dit is een aardige jongen. b'. Dat/Dit zijn aardige jongens.  
 that/this is a nice boy that/this are nice boys

Bos (1961), following De Groot (1949:153), argued that it is the noun phrase that functions as subject and the pronoun that functions as predicate. One reason is that the finite verb in the primed examples in (126) agrees in number with the plural



- Another reason to assume that the pronouns function as predicates is that when the nominal predicate is replaced by a pronoun, the latter will appear in its nominal form; this cannot, of course, be shown for the second person, plural pronoun given that the subject and object form are identical.

- The claim that the pronouns in (126) function as predicates of the copular constructions was challenged by Merckens (1961), who argued that these examples are actually ambiguous. This is illustrated by the examples in (129), the meanings of which will become clear from the English translations. The function of the left-dislocated constituents in these and the following examples is to force the intended subject/predicate reading on the pronoun *dat*.

- The same ambiguity is apparent from embedded clauses like those in (130). Given that subject pronouns are normally right-adjacent to the complementizer and predicates left-adjacent to the verbs in clause-final position; cf. *Ik vind dat dat mooi is* 'I think that that is beautiful' versus *\*Ik vind dat mooi dat is*. This means that *dat* functions as a subject in (130a) and as a predicate in (130b). The primed examples show that this conclusion is supported by the interpretation of these examples.

- (130) a. Jan en Piet, ik denk dat dat aardige jongens zijn. [*dat* = subject]  
 Jan and Piet I think that that nice boys are  
 a'. \*Behulpzaam, ik denk dat dat aardige jongens zijn.  
 helpful I think that that nice boys are  
 b. Behulpzaam, ik denk dat aardige jongens dat zijn. [*dat* = predicate]  
 helpful I think that nice boys that are  
 b. \*Jan en Piet, ik denk dat aardige jongens dat zijn.  
 Jan and Piet I think that nice boys that are

A similar contrast can be found in *yes-no* questions, where the subject pronoun normally appears right-adjacent to the verb in sentence initial position: *Is dat mooi?* 'Is that beautiful?' versus *\*Is mooi dat?*. This means that *dat* functions as a subject in (131a) and as a predicate in (131b). The primed examples show again that this conclusion is supported by the interpretation of these examples.

- (131) a. Jan en Piet, zijn dat aardige jongens? [dat = subject]  
 Jan and Piet, are that nice boys  
 a'. \*Behulpzaam, zijn dat aardige jongens?  
 helpful are that nice boys  
 b. Behulpzaam, zijn aardige jongens dat? [dat = predicate]  
 helpful are nice boys that  
 b'. \*Jan en Piet, zijn aardige jongens dat?  
 Jan and Piet are nice boys that

A piece of indirect evidence not mentioned by Merckens in favor of the claim that we are dealing with ambiguous structures is provided by the *vinden*-constructions in (132). Given that the complementive always follows its logical SUBJECT in the middle field of the clause, the fact that both orders are possible in (132) show that *dat* may function either as the subject or as the complementive of the construction; again this is supported by the interpretations of these examples.

- (132) a. Marie zal [<sub>SC</sub> dat aardige jongens] vinden. [dat = subject]  
 Marie will that nice boys consider  
 b. Marie zal [<sub>SC</sub> aardige jongens dat] vinden. [dat = predicate]  
 Marie will nice boys that consider

A final piece of evidence involves pronominalization. Consider the discourse chunk in (133), in which participant B is backing up participant A's claim that Jan and Piet are nice boys. In B's reaction the noun phrase *aardige jongens* is not replaced by the referential personal pronoun *zij*, as would be expected if this noun phrase were the subject of the sentence, but by *dat*, as would normally be the case when we are dealing with a predicate. Observe that the copula is plural in this case despite the fact that normally the pronouns *het* and *dat* are both syntactically singular.

- (133) a. Het zijn aardige jongens. [speaker A]  
 it are nice boys  
 b. Dat zijn het zeker! [speaker B]  
 that are it for.sure

The discussion above has conclusively shown that Bos' claim that the neuter pronouns in the copular constructions in (126) can only function as the predicate of the construction cannot be maintained; the structures are syntactically ambiguous in the sense that the pronoun can function either as the subject or as the predicate of the copular construction. In fact, there is even reason to assume that, due to its sentence-initial position, the pronoun *het* 'it' in example (126a) must be interpreted as the subject of the copular construction. The reason for this is that sentence-initial *het* normally functions as subject; the object pronoun *het*, for example, cannot be topicalized as will be clear from the grammaticality contrast between *Hij zag het*

'He saw it' and \**Het zag hij*. The (b)-examples in (134) show that the ban on topicalization also holds for *het* when it functions as a complementive; whereas the primeless example is ungrammatical with, the corresponding primed example without topicalization is fully acceptable (although perhaps less preferred than its counterpart with *dat*, which is indicated here with a question mark).

- (134) a. Jan en Piet, dat/het zijn aardige jongens. [dat/het = subject]  
 Jan and Piet that/it are nice boys  
 'Jan and Piet are nice boys.'
- b. \*Behulpzaam, day/\*het zijn aardige jongens. [dat/het = predicate]  
 helpful that/it are nice boys
- b'. Behulpzaam, aardige jongens zijn dat/?het. [dat/het = predicate]  
 helpful nice boys are that/it

The remainder of this section will pinpoint some special properties of the copular construction under discussion. We have already seen in (126) and (127) that the predicate must be nominal; adjectival and prepositional complementives are excluded. The contrast between the primeless and primed examples in (135) show, however, that it is not the case that any nominal predicate can be used: whereas the predicate can either contain an article or be bare when the subject is a noun phrase or a regular pronoun, the pronouns *het*, *dat*, and *dit* require that an article be present.

- (135) a. Jan/Hij is een aardige jongen. a'. Het/Dat/Dit is een aardige jongen.  
 Jan/he is a kind person it/that/this is a nice boy
- b. Jan/Hij is leraar. b'. \*Het/Dat/Dit is leraar.  
 Jan/he is teacher. it/that/this is teacher
- 'Jan is a teacher.'

The examples in (127) show again that although the pronouns *het*, *dit* and *dat* are syntactically singular, the examples in (136) can be used to refer to sets of entities.

- (136) a. Jan, dat is een aardige jongen.  
 Jan that is a nice boy
- b. Jan en Peter, dat zijn aardige jongens.  
 Jan and Peter that are nice boys

Although the pronouns *het*, *dit* and *dat* are syntactically neuter, they can be used to refer to non-neuter antecedents. This is already clear from example (136a) but even more conspicuous in examples like (137a) where the predicate does agree in gender with the antecedent of the pronoun *dat*. For completeness' sake, (137b) provides an example in which the antecedent differs both in number and gender from the pronoun *dat*.

- (137) a. De snelste auto, dat is deze/die.  
 the fastest car that is this.one/that.one
- b. De snelste auto's, dat zijn deze/die.  
 the fastest cars that are this.one/that.one

In the examples above, the antecedent of the neuter pronoun is referential in the sense that it denotes a (possibly singleton) set of entities. The examples in (138)

show that the antecedent can also be generic, although it seems that the indefinite generic noun phrase in (138c) is somewhat marked.

- (138) a. De walvis, dat is een zoogdier.  
           the whale that is a mammal  
       b. Walvissen, dat zijn zoogdieren.  
           whales that are mammals  
       c. <sup>?</sup>Een walvis, dat is een zoogdier.  
           a whale that is a mammal

The markedness of (138c) may be related to the fact that examples in which the antecedent of the neuter pronoun is quantified are also marked; whereas the generic example in (139a) is fully acceptable, the corresponding quantificational construction in (139b) is degraded.

- (139) a. Katten, dat zijn leuke huisdieren.  
           Cats that are nice pets  
       b. <sup>??</sup>Sommige/alle katten, dat zijn leuke huisdieren.  
           some/all cats that are nice pets

### **8.3. Adverbial use of the noun phrase**

Section 8.3.1 will show that, under certain conditions, noun phrases can be used as adverbial phrases of time. Other adverbial uses are not readily possible, although Section 8.3.2 will briefly discuss some examples where the adverbially used noun phrase is non-temporal.

#### *8.3.1. Temporal phrases*

This section is divided into four parts. Subsection I focuses on adverbially used definite noun phrases, and also discusses certain more general properties of adverbially used noun phrases. Subsection II and III continue with a discussion of indefinite and quantified noun phrases, respectively. Subsection IV will specifically consider noun phrases whose nominal head is a name for a conventional unit of time, like a day of the week, a month of the year, etc.

##### *I. Definite noun phrases*

In order for a noun phrase to be usable as an adverbial phrase of time, it must be possible to construe the nominal head as denoting a certain time interval or a certain point on the time axis. This is, of course, typically the case with nouns denoting certain conventional time spans, like *dag* 'day', *ochtend* 'morning', *maand* 'month', etc. However, nouns denoting certain durative events, like *wedstrijd* 'match' or *lezing* 'lecture', can also be used in this way. In the subsections below, we will start by discussing examples in which the adverbially used noun phrase refers to a certain time interval, followed by a discussion of examples in which it refers to a specific point in time. This section is concluded with a discussion of some differences between noun phrases used as time adjuncts and noun phrases used as arguments.

*A. Adverbially used noun phrases referring to a time interval*

In (140), we give some examples in which the adverbially used noun phrase refers to a certain time interval. It must be noted that all noun phrases are obligatorily modified by a quantifier-like element like *heel* 'whole', *half* 'half' and *godganse* 'whole blessed'; dropping these modifiers results in unacceptability.

- (140) a. Jan bleef de <sup>??</sup>(hele) morgen thuis.  
 Jan stayed the whole morning home  
 'Jan stayed home the whole morning.'  
 b. Marie zat de \*(halve) lezing te gapen.  
 Marie sat the half lecture to yawn  
 'Mary was yawning during large parts of the lecture.'  
 c. Jan zit de \*(godganse) dag te kletsen.  
 Jan sits the whole blessed day to chatter  
 'Jan is chattering during the whole blessed day.'  
 d. Hij heeft zijn \*(hele) leven in Amsterdam gewoond.  
 he has his whole life in Amsterdam lived  
 'He has always lived in Amsterdam.'

*B. Adverbially used noun phrases referring to a certain point on the time axis*

In (141), we give some examples in which the adverbially used noun phrase refers to a specific point in time. These noun phrases typically contain a modifier which clarifies the position of the referent of the noun phrase on the time axis.

- (141) a. Marie kwam de volgende ochtend/dag weer thuis.  
 Marie came the next morning/day again home  
 'Marie came home again the next morning.'  
 b. Marie was de week voor Pasen nog in Frankrijk.  
 Marie was the day before Easter still in France  
 'Marie was the week before Easter still in France.'  
 c. Ik ben de volgende les weer aanwezig.  
 I am the next lesson again present  
 'I will be present again for the next lesson.'

Unlike in adverbially used noun phrases referring to a time interval, the modifiers in noun phrases referring to specific point in time can be dropped provided that there is some other means to take over their function, e.g., by using a demonstrative pronoun instead of a definite article. Using a demonstrative may also save the ungrammatical examples in (140a&b), but at the expense of the durative reading: in an example like *Jan bleef die morgen thuis* 'Jan stayed home that morning', the adverbial phrase refers to a certain point on time axis, not to a time interval.

- (142) a. Marie kwam die/\*de ochtend weer thuis.  
 Marie came that/the morning again home  
 b. Marie was die/\*de week nog in Frankrijk.  
 Marie was that/the week still in France  
 c. Ik ben <sup>?</sup>die/\*de les weer aanwezig.  
 I am that/the lesson again present

C. Differences between nominal time adjuncts and the direct object

Since the adverbial phrase has the form of a regular noun phrase, it can easily be confused with a direct object. In example (143a), the noun phrase can only be used as an adverbial phrase since it does not satisfy the selectional properties of the main verb: *de hele dag* does not refer to a danceable entity. Nevertheless, at first sight this example closely resembles example (143b), where the noun phrase *de hele dag* does function as the direct object of the main verb *verprutsen* 'to botch/spoil'.

- (143) a. Jan danste de \*(hele/halve/godganse) avond. [adjunct]  
 Jan danced the whole/half/god.blessed night  
 b. Jan verprutste de \*(hele/halve/godganse) avond. [argument]  
 Jan spoiled the whole/half/god.blessed night

There are, however, several differences between these examples, all related to the fact that *de hele avond* functions as an adjunct in (143a), but as an object in (143b). A first difference, illustrated in (144), is that the noun phrase is optional in (143a), whereas it must be realized in (143b). A second difference, also illustrated by these examples, is that (143a) can be paraphrased by means of the *en doet dat*-test, whereas (145a) cannot; cf. °adverb tests in the glossary.

- (144) a. Jan danste (en hij deed dat de hele/halve/godganse avond).  
 Jan danced and he did that the whole/half/god.blessed night  
 b. \*Jan verprutste (en hij deed dat de hele/halve/godganse avond).  
 Jan spoiled and he did that the whole/half/god.blessed night

Finally, the examples in (145) show that passivization of (143a) gives rise to an impersonal passive, whereas passivization of (143b) results in promotion of the noun phrase to subject.

- (145) a. Er werd de hele/halve/godganse avond gedanst.  
 there was the whole/half/god.blessed night danced  
 b. De hele/halve/godganse avond werd verprutst.  
 the whole/half/god.blessed night was spoiled

An example like (146a) is genuinely ambiguous between the two readings. The verb *spelen* 'to play' can be used transitively as in *een etude spelen* 'to play/perform an etude' or as an intransitive verb like in *(met poppen) spelen* 'to play (with dolls)'. In the active construction in (146a), the verb can be construed in both ways. When the noun phrase is dropped or the sentence is paraphrased by means of the *en doet dat*-test, as in (146b), only the intransitive reading survives. The passive construction can be also used to disambiguate the sentence: when the passive construction is impersonal, as in (146c), we are dealing with intransitive *spelen*; when the noun phrase is promoted to subject, as in (146c'), we are dealing with transitive *spelen*.

- (146) a. Jan speelde het hele concert.  
 Jan played the whole concerto/concert  
 'Jan played the whole concerto' or 'Jan played during the whole concert'  
 b. Jan speelde (en hij deed dat het hele concert).  
 Jan played and he did that the whole concert

- c. Er werd het hele concert gespeeld.  
there was the whole concert played
- c'. Het hele concert werd gespeeld.  
the whole concerto was played

In this specific case, the addition of an instrumental PP can also have a disambiguating effect since the referent of the complement of the preposition *met* may make clear which use of *spelen* is intended: in *Jan speelde het hele concert met zijn poppen* 'Jan played with his dolls during the whole concert', the verb is clearly used intransitively. Verbs that yield a similar ambiguity as *spelen* are *zingen* 'sing' and *fluiten* 'to whistle/to play the flute'.

## II. Indefinite noun phrases

Indefinite noun phrases normally refer to a certain time interval, as in (147). In these cases, the noun typically denotes a conventional time unit like *uur* 'hour', *dag* 'day', *maand* 'month', etc. Often these nouns surface in their diminutive form.

- (147) a. Hij komt een uurtje/<sup>?</sup>uur op visite.  
he comes an hour<sub>dim</sub>/hour on visit
- b. Hij is een jaartje/jaar in Frankrijk geweest.  
he is a year<sub>dim</sub>/year in France been

## III. Quantified noun phrases

Indefinite noun phrases containing a numeral or a quantifier like *enkele* 'some/several' may also be used to refer to a time interval. In such cases the noun normally denotes a conventional time unit. Some examples are given in (148). Note that the noun sometimes appears in its singular form when preceded by a cardinal numeral; see Section 6.1.1.3, sub IIB, for discussion.

- (148) a. Hij is drie weken op vakantie geweest.  
he is three weeks on holiday been  
'He has been on holiday for three weeks.'
- b. Hij heeft drie uur/<sup>?</sup>uren liggen slapen.  
he has three hours lie sleep  
'He has been sleeping for three hours.'
- c. Hij heeft enkele uren vastgezet in de lift.  
he has some hours sat.stuck in the elevator  
'He has been stuck in the elevator for some hours.'

On the frequency reading, the noun must denote a time unit that is relatively short. Some nouns that typically appear as the head of a noun phrase used as a frequency adverb are *ochtend* 'morning', *middag* 'afternoon', *avond* 'night', but not *week* 'week' or *maand* 'month'. Consider the examples in (149). In an example like (149a), the noun phrase *drie avonden* 'three nights' refers to three separate points in time, whereas *twee weken* 'two weeks' in (149b) is instead interpreted as referring to a certain time interval.

- (149) a. Ik heb deze week drie avonden gedanst.  
 I have this week three nights danced  
 'This week, I have danced on three nights.'  
 b. Ik heb deze maand twee weken gewandeld.  
 I have this month two weeks walked  
 'This month, I have walked for two weeks.'

In addition to the nouns denoting a conventional time unit, nouns like *keer* or *maal* 'time' in (150a) are typically used in these contexts: note that these nouns normally take the singular form when preceded by a numeral, but the plural form when preceded by a quantifier like *enkele* 'several'. Occasionally, examples like (150b) can also be found, where the noun denotes a set of durative events.

- (150) a. Ik heb deze maand twee keer/enkele keren gewandeld.  
 I have this month two time/several times walked  
 'This month, I have walked two/several times.'  
 b. Jan is drie lessen afwezig geweest.  
 Jan is three lessons absent been  
 'Jan has been absent at three lessons.'

On the frequency reading, there seems to be no restriction on the quantifier in the noun phrase; whereas the universal quantifiers *alle* 'all' and *elke* 'every' and the quantifier *sommige* 'some' are not possible in noun phrases referring to a time interval, they can appear in noun phrases used as adverbial phrases of frequency.

- (151) a. Ik heb deze week alle avonden gedanst.  
 I have this week all nights danced  
 'This week I have danced all nights.'  
 b. Ik heb deze week elke avond gedanst.  
 I have this week all nights danced  
 'This week I have danced every night.'  
 c. Ik heb deze week sommige avonden gedanst.  
 I have this week some nights danced  
 'This week I have danced some nights.'

#### IV. Names of days, months, seasons, etc.

The previous subsection has shown that noun phrases headed by names of days, months, seasons, and other conventionally distinguished time units can be used as adverbial phrases. There is, however, a rather complicated system that determines whether these nouns can or must be accompanied by a determiner. Further, the names of some of these time units may feature in noun phrases exhibiting genitive case; some examples are given in (152).

- (152) a. names of days: 's *maandags* 'on Monday(s)', *dinsdags* 'on Tuesday(s)',  
 's *woensdags*, *donderdags*, *vrijdags*, 's *zaterdags*, 's *zondags*  
 b. seasons: 's *zomers* 'in the summer', 's *winters* 'in the winter', \*'s *herfts*,  
 \*'s *lentes*  
 c. other conventional time units: 's *morgens* 'in the morning', 's *middags* 'in the  
 afternoon', 's *avonds* 'in the evening', 's *nachts* 'at night', etc.



Note that the nouns in these genitive phrases are generally preceded by the reduced form of the genitive article *des* ‘the’ and inflected with the genitive ending *-s*. Since modern Dutch does not make use of the case-inflected forms of the noun and the determiner, the forms in (152) must be considered lexicalized, which is also supported by the fact that the genitive article is missing in the case of *dinsdags*, *donderdag* and *vrijdags*, and the fact that the nouns *herfst* ‘fall’ and *lente* ‘spring’ do not have these genitive counterparts.

#### A. Names of days

Noun phrases headed by the name of a day can readily be used as adverbial phrases. When preceded by a determiner, they refer to a time interval, and are then preferably modified by a quantifier like *heel* ‘whole’, as in (153a). When they are not preceded by a determiner, they refer to a specific point of time, which may either precede or follow the speech time: a noun phrase like *maandag* ‘Monday’ in (153b&b’) can either refer to a time before or after the speech time; the actual reading depends on the tense of the modified clause and can be made explicit by adding a modifier like *afgelopen* ‘last’ or *komende* ‘next’. Note that when a PP-modifier is used, as in (153c), a determiner must be used.

- (153) a. Jan heeft de hele maandag gewandeld.  
 Jan has the whole Monday walked  
 ‘Jan has walked all Monday.’  
 b. (Afgelopen) maandag was ik in Antwerpen.  
 last Monday was I in Antwerp  
 ‘Last Monday, I was in Antwerp.’  
 b’. (Komende) maandag ben ik in Antwerpen.  
 next Monday am I in Antwerp  
 ‘Next Monday, I will be in Antwerp.’  
 c. We komen \*(de) zondag voor/na Pasen bij je op bezoek.  
 we come the Sunday before/after Easter at you on visit  
 ‘We come to visit you the Sunday after Easter.’

The genitive form can also be used to refer to a certain point in time. The difference between the adverbial phrase *maandag* in (153b&b’) and *’s maandags* in (154a) is that the former refers to the Monday *immediately* preceding or following the speech time, whereas the latter refers to a certain Monday within a contextually determined span of time, e.g., the Monday during the Easter weekend; using this genitive form to refer to the Monday immediately preceding or following the speech time gives rise to an unacceptable result. The genitive form is also very common as a frequency adverb; example (154b) shows that in this use the genitive form alternates with the adverbial PP *op maandag*.

- (154) a. ’s Maandags heb ik lekker gewandeld.  
 on Monday have I nicely walked  
 ‘On Monday I made a nice walk.’  
 b. ’s Maandags/Op maandag ga ik vaak naar de film.  
 on Mondays go I often to the movies  
 ‘On Mondays, I often go to the movies.’

### B. Names of months

Noun phrases containing the names of months can also be used adverbially. They then refer to a certain time interval, and are normally modified by a quantifier like *heel* 'whole', as in (155a). Using the modifier *half* 'half', as in (155b), leads to ambiguity: it can express that the proposition holds for a large part of the month, or that it holds around the 15<sup>th</sup> of that month. In the latter use it has a similar function as the numeral in (155c), in which case, however, the adverbial phrase is preferably realized as a PP headed by *op* 'at'.

- (155) a. Jan is \*(heel) april in de Verenigde Staten.  
 Jan is whole April in the United States  
 'Jan will be in the US during April.'  
 b. Jan is half april in de Verenigde Staten.  
 Jan is half April in the United States  
 'Jan will be in the US during a large part of April/around April 15<sup>th</sup>.'  
 c. Jan is (op) 13 april in de Verenigde Staten.  
 Jan is at 13 April in the United States  
 'Jan will be in the US on April 13<sup>th</sup>'

Noun phrases headed by the names of months are not used to refer to a certain point in time, nor do the names of months appear in genitive phrases. Instead, a PP is used, headed by the temporal preposition *in*: *in januari* 'in January'. Note that the names of months are normally not preceded by a determiner.

### C. Names of seasons

Noun phrases headed by the name of a season can be used adverbially to refer to a certain time interval, as in (156a). Unlike the names of months, names of seasons must then be preceded by a determiner. Normally, a modifier like *heel* 'whole' is present. When used to denote a certain position on the time axis, the noun phrase optionally contains a determiner, as shown in (156b). As is shown in (156c), a modifier like *komende* is required, unless the determiner is a demonstrative.

- (156) a. Ik ben \*(de) hele lente/zomer/herfst/winter in de Verenigde Staten.  
 I am the whole spring/summer /fall/winter in the United States  
 b. Ik ga (de) komende lente/zomer/herfst/winter niet op vakantie.  
 I go the next spring/summer /fall/winter not on holiday  
 'I won't go on holiday next spring/summer /fall/winter.'  
 c. Ik ga deze/\*de winter niet op vakantie.  
 I go this/the winter not on holiday  
 'I won't go on holiday this (coming) winter.'

The use of the genitive form to refer to a certain season within a contextually determined time is not very natural: using (157a) to refer to, say, the winter of 1981 seems forced. It is very common, however, to use the genitive form as an adverbial phrase of frequency, as in (157b). In this use, the genitive form alternates with the PP *in de winter* 'in winter'; this option is, of course, the only one available for the nouns *lente* 'spring' and *herfst* 'fall', since they do not have a genitive form.

- (157) a. <sup>#</sup>Ik heb 's winters heerlijk gewandeld.  
I have in winter nicely walked  
b. 's Winters is het hier erg koud.  
in winter is it here very cold  
'In winter, it is very cold here.'  
c. In de lente is het hier erg mooi.  
in the spring is it here very beautiful  
'In spring, it is very beautiful here.'

#### D. Names of other conventional time units

Other conventional time units are expressed by nouns like *weekend* 'weekend', *dag* 'day', *week* 'week', *ochtend* 'morning' or *avond* 'night'. When a noun phrase headed by these nouns refers to a time interval, as in the (a)-examples of (158) and (159), it is preceded by a determiner and a modifier like *heel* 'whole' is required. When the noun phrase is used to refer to a certain point on the time axis, as in the (b)-examples, the determiner can often be left out. The (c)-examples show that the use of a modifier is obligatory unless the determiner is a demonstrative. When the noun phrase contains a PP-modifier, as in the (d)-examples, the determiner is obligatory.

- (158) a. Ik ben \*(het) hele weekend in Antwerpen.  
I am the whole weekend in Antwerp  
b. Ik was het vorige weekend/vorig weekend in Antwerpen.  
I was the last weekend/last weekend in Antwerp  
c. Ik ben dat/<sup>?</sup>het weekend in Antwerpen.  
I am that/the weekend in Antwerp  
d. Ik kom het weekend voor/na Pasen bij je op bezoek.  
I come the weekend before/after Easter at you on visit  
'I come to visit you the weekend before/after Easter.'
- (159) a. Ik ben \*(de) hele dag/avond thuis.  
I am the whole day/evening home  
b. Hij komt <sup>?</sup>(de) komende dag/avond weer thuis.  
he comes the next day/evening again home  
c. Hij komt <sup>?</sup>die/\*de dag/avond weer thuis.  
he comes that/the day/evening again home  
d. Ik kom de dag voor/na Pasen bij je op bezoek.  
I come the day before/after Easter at you on visit  
'I come to visit you the day before/after Easter.'

Note, however, that dropping the determiner in (159b) is somewhat marginal. It may be the case that the use of the bare noun phrases *komende dag* and *komende avond* is blocked by the existence of the lexical forms *morgen* 'tomorrow' and *morgenavond* 'tomorrow night'. This is supported by the fact that noun phrases like *vorige/afgelopen week* 'last/the past week' or *volgende maand* 'next month', for which such lexical items do not exist, are perfectly acceptable without the determiner: actually, in these cases the determiner cannot be used.

- (160) a. Ik was (\*de) vorige/afgelopen week/maand in Amsterdam.  
 I was the last/past week/month in Amsterdam  
 'I was in Amsterdam last/the past week/month.'  
 b. Ik ga (\*de) volgende week/maand naar Amsterdam.  
 I go the next week/month to Amsterdam  
 'I go to Amsterdam next week/month.'

Nouns denoting a certain part of the day also allow a genitive form: '*s morgen* 'in the mornings', '*s middags* 'in the afternoon(s)', '*s avonds* 'in the evening/night(s)', '*s nachts* 'in the night(s)', etc. These genitive phrases can either refer to the morning, afternoon, etc. of a contextually defined day, or be used as an adverbial phrase of frequency.

- (161) a. Hij kwam 's avonds doodmoe thuis.  
 he came in the evening dead.tired home  
 'The evening of that day, he came home dead tired.'  
 b. 's Morgens werkt hij thuis.  
 in the morning(s) works he home  
 'In the morning(s), he works at home.'

The genitive form '*s avonds* and '*s morgen* in (161) cannot refer to the night/morning of the day that includes the speech time: in order to do that, one has to make use of the form *vanavond* 'tonight'/'*vanmorgen* 'this morning'. Other forms featuring the morpheme *van* that have a similar blocking effect are: *vandaag* 'today', *vanmiddag* 'this afternoon' and *vannacht* 'tonight'. Perhaps these forms are related to the phrases *van de week* 'some time this week', *van de maand* 'some time this month', *van de winter* 'some time last/next winter'.

- (162) a. Ik ben vanavond thuis.  
 I am tonight home  
 b. Hij was vanmorgen ziek.  
 he was this.morning ill

Finally, note that there are no genitive forms of the nouns *dag* 'day', *week* 'week', *maand* 'month' or *jaar* 'year' that can be used in the contexts in (161). There do exist archaic genitive forms like *daags* and '*s jaars* that occur in formal language, but these forms do not have the same function as the genitive forms in (161); some examples are *daags na die ontmoeting* 'a day after that meeting' and *tweemaal daags/s jaars* 'twice a day/year'.

### 8.3.2. Non-temporal adverbial phrases

This section briefly mentions some examples where noun phrases are or seem to have been used as non-temporal adverbial phrases. First we can mention noun phrases following the measure verbs like *kosten* 'to cost', *duren* 'to last' in (163). Since it is generally assumed that these measure noun phrases do not act as direct objects, we may assume that they are adverbial in nature. However, since we are clearly dealing with phrases selected by the verb it can also be argued that we are dealing with complements of a special sort.

- (163) a. Dat boek kost tien euro.  
           that book costs ten euro  
       b. De voorstelling duurt twee uur.  
           the show lasts two hours  
           ‘The show will last two hours.’

The use of measure phrases is very productive in examples like (164a) and (164b) where they act as modifiers of the PP *naast het doel* and the AP *diep*, respectively. Examples like these are extensively discussed in Chapter P3 and Section A3.1.4.2.

- (164) a. Jan schoot de bal drie meter naast het doel.  
           Jan shot the ball three meter next.to the goal  
       b. De schat ligt drie meter diep.  
           the treasure lies three meter deep

Finally, we want to note the idiomatic example in (165a), where the phrase *een uur in de wind* seems to be used as an °intensifier of the verb *stinken* ‘to stink’. In the Van Dale dictionary, the meaning of *een uur* in this construction is described as “as far as one can go in an hour”, so that the meaning of (165a) is something like “One can even smell Jan if one travels an hour against the wind”. Therefore, *een uur* seems to act here as a measure phrase modifying the PP *in de wind*. Another example of a similar kind is given in (165b).

- (165) a. Jan stinkt een uur in de wind.  
           Jan stinks an hour in the wind  
           ‘Jan stinks extremely badly.’  
       b. Er is hier een uur in de omtrek geen café te vinden.  
           there is here an hour in the surroundings no bar to find  
           ‘In whatever direction one goes from here, one will not be able to find a bar for an hour.’

#### 8.4. Bibliographical notes

The literature on *wh*-movement and topicalization is vast, and we will only be able to mention to some of the most prominent contributions to the discussion here. The core properties of these movements have been described by Chomsky (1977). An extensive discussion of the so-called °complementizer-trace phenomenon can be found in Chomsky & Lasnik (1977), and the object-subject asymmetry has played an important role in the formulation of the Empty Category Principle in Chomsky (1981). The °Superiority Condition is taken from Chomsky (1973), and has later been subsumed under the Relativized Minimality Condition proposed in Rizzi (1990). This section did not fully discuss all of the intricacies involved in these movements. For example, we barely scratched the issue related to the domain from which long *wh*-movement is possible (cf. Huang 1982). For the moment we confine ourselves to making reference to the papers collected in Cheng & Corver (2006) for a review of the current state of the art. We will return more extensively to issues concerning these movements in Broekhuis & Corver (in prep).

The literature on scrambling is also vast but, unlike the case of *wh*-movement and topicalization, it has not yet led to a clear consensus on the nature of the

operation. The existing approaches to object scrambling can be divided into three different groups depending on whether it is considered to be A- or A'-movement, or to involve base-generation; a representative sample of these approaches can be found in Corver & Van Riemsdijk (1994). Webelhuth (1989/1992) has shown that Dutch/German object scrambling has properties of both A- and A'-movement, a fact that is often referred to as 'Webelhuth's paradox'. This has given rise to the claim that the notion of scrambling actually refers to (at least) two different types of movement; cf., e.g., Vanden Wyngaerd (1988/1989), Déprez (1989), Mahajan (1990), Neeleman (1994b), and Broekhuis (2008). The type of scrambling discussed in this chapter is of the A-movement sort.

Again, it is not possible to give a representative overview of the literature concerning the expletive construction and the so-called definiteness effect. Some important contributions have already been mentioned in the bibliographical notes to Chapter 6.

A classical study on Dutch copular constructions with a nominal predicate is Blom & Daalder (1977). More recent studies concerning nominal predicates are Moro (1997) and Den Dikken (2006); we refer the reader to these studies for additional references. There are not many studies on the adverbial use of noun phrases; our discussion on the use of noun phrases as temporal adjuncts is mainly built on the discussion found in the more traditional grammars. For the use of noun phrases as measure phrases, see Klooster (1972) and Corver (1990).



## Glossary

This appendix provides an alphabetical list of notions that may not be familiar to the reader. In the unhelped-for case that the reader does not find what he is looking for here, we refer the reader to the internet version of the excellent and freely accessible *Lexicon of Linguistics* edited by Johan Kerstens, Eddy Ruys and Joost Zwarts: [//www2.let.uu.nl/Uil-OTS/Lexicon/](http://www2.let.uu.nl/Uil-OTS/Lexicon/).

### Absolute *met*-construction:

A prepositional phrase headed by the preposition *met* ‘with’. The complement of *met* consists of a noun phrase and some other category which is predicated of this noun phrase. Some examples are given within brackets in (i).

- (i) a. [Met Peter ziek] kunnen we die vergadering niet houden.  
with Peter ill can we that meeting not keep
- b. [Met Peter in het ziekenhuis] kunnen we die vergadering niet houden.  
with Peter in the hospital can we that meeting not keep

### AcI-construction:

The abbreviation AcI stands for *Accusativus cum Infinitivo* (accusative with infinitive). The AcI-construction is an infinitival clause, in which the subject is not left implicit but realized as an accusative noun phrase. Such constructions only occur as the complement of the causative/permissive verb *laten* ‘to make/let’ and perception verbs like *zien* ‘to see’ and *horen* ‘to hear’. In (i) the accusative subject of the infinitival clause is given in italics.

- (i) a. Jan laat [*het meisje/haar* een liedje zingen]  
Jan lets the girls/her a song sing
- b. Jan zag/hoorde [*het meisje/haar* vertrekken]  
Jan saw/heard the girl/her leave

### Across-the-Board movement:

Examples (ib&b’) show that subextraction from a coordinated structure is normally excluded; cf. °Coordinate Structure Constraint. This does not hold, however, when the movement applies in a so-called Across-the-Board fashion, that is, affects all conjuncts: (ic) is acceptable due to the fact that the *wh*-phrase *wat* ‘what’ is in a sense moved from (related to an interpretative gap in) both conjuncts.

- (i) a. Jan heeft [[een boek van Peter gestolen] en [een CD/boek aan Marie gegeven]].  
Jan has a book from Peter stolen and a CD/book to Marie given
- b. \*Wat<sub>i</sub> heeft Jan [[*t<sub>i</sub>* van Peter gestolen] en [een boek aan Marie gegeven]]?  
what has Jan from Peter stolen and a book to Marie given
- b’. \*Wat<sub>i</sub> heeft Jan [[een boek van Peter gestolen] en [*t<sub>i</sub>* aan Marie gegeven]]?  
what has Jan a book from Peter stolen and to Marie given
- c. Wat<sub>i</sub> heeft Jan [[*t<sub>i</sub>* van Peter gestolen] en [*t<sub>i</sub>* aan Marie gegeven]]?  
what has Jan from Peter stolen and to Marie given



**Adicity:**

The adicity (or valency) of a lexical head (verb, noun, adjective, preposition) concerns the number of arguments this lexical head takes. A monadic head takes one, a dyadic head takes two, and a triadic head takes three arguments. Lexical heads that do not take any arguments are called avalent.

**Adjunct:**

A constituent in the domain of a lexical head H that is not selected by H. The notion of adjunct stands in opposition to the notion of argument, which is a constituent that is selected by H. Adjuncts and arguments differ in that the first are normally optional, whereas the latter are generally obligatory (or at least semantically implied). The PP *in de keuken* ‘in the kitchen’ in (i) is optional and can be considered an adjunct, whereas the noun phrase *de aardappelen* ‘the potatoes’ is virtually obligatory, and should be considered an argument of the verb *schillen* ‘to peel’.

- (i) a. Jan schilt de aardappelen (in de keuken).  
       b. Jan schilt <sup>\*?</sup>(de aardappelen) in de keuken.  
           Jan peels the potatoes in the kitchen

**Adverb:**

The notion of adverb does not denote a set of entities with a certain categorial status, as do the notions verb, noun, adjective and preposition, but rather a set of lexical elements that can perform a certain syntactic function in the clause, more specifically that of an adverbial phrase. Our use of the notion of adverb should therefore be seen as shorthand for “adverbially used adjective” given that many adverbs exhibit adjectival properties: they may be used attributively or predicatively in other contexts, or exhibit typical syntactic or morphological properties like the ones given in (i).

- (i) a. Modification by *erg/heel/zeer* ‘very’  
       b. Comparative and superlative formation  
       c. *On-* prefixation  
       d. Having an adjectivizing suffix

Despite the fact that we do not acknowledge the existence of a lexical category “adverb”, it cannot be denied that there are certain adverbs, like the °intensifiers *zeer* ‘very’ and *heel* ‘very’ mentioned in (ia), for which there is no direct syntactic or morphological evidence that they are adjectival in nature. However, the fact that they cannot be inflected for tense and agreement shows that they are not verbs, and the fact that they can neither be preceded by a determiner nor appear in an argument position strongly suggests that they are not nouns either. Therefore, we provisionally conclude that they must be adjectives, which is supported by the fact that they share the semantic property of being able to modify an adjective.

**Adverb tests:**

In cases of modification of a verbal projection, at least two types of adverbial phrases must be distinguished. The first type involves modification of the proposition expressed by the clause, which is therefore referred to as a clause adjunct. Clauses that contain this type of adverbial phrase can be paraphrased as in

(ia); a concrete example is given in (ia' & a''). The second type involves modification of the verb (phrase) only, and is referred to as a VP adjunct. Clauses that contain this type of adverbial phrase can be paraphrased as in (ib), in which the pronoun must be construed as identical to the subject of the clause; a concrete example is given in (ib' & b'').

- (i) a. Clause adjunct: Het is ADVERB zo dat CLAUSE
- a'. Jan werkt natuurlijk.
- Jan works of.course
- a''. Het is natuurlijk zo dat Jan werkt.
- it is of.course the.case that Jan works
- b. VP adjunct: [<sub>CLAUSE</sub> subject<sub>i</sub> ...] en pronoun<sub>i</sub> doet dat ADVERB
- b'. Jan lacht hard.
- Jan laughs loudly
- b''. Jan<sub>i</sub> lacht en hij<sub>i</sub> doet dat hard.
- Jan laughs and he does that loudly

### **Amplifier:**

See °Intensifier.

### **Anticipatory pronoun/pronominal PP:**

Clauses may have argument status with respect to a lexical head. Generally, however, they do not occur in the regular argument position, but are extraposed. For instance, if the argument position is part of a verbal projection, it may optionally be occupied by the pronoun *het* 'it', which is called the anticipatory pronoun, as in (i). If the clause is part of a prepositional complement, the anticipatory pronominal PP *er*-P may optionally occur, as in (ii). See °R-extraction for a discussion of the fact that the anticipatory pronominal PP *er over* is split.

- (i) Jan betwijfelt (het) of Marie komt.
- Jan doubts it whether Marie comes
- 'Jan doubts whether Marie will come.'
- (ii) Jan is (*er*) boos (*over*) dat Marie niet komt.
- Jan is there angry about that Marie not comes
- 'Jan is angry that Marie will not come.'

### **Argument:**

An argument is a constituent in the domain of a lexical head H that is selected by H. The notion of argument stands in opposition to that of °adjunct, which is a constituent that is not selected by H. Arguments and adjuncts differ in that the first are normally obligatorily present (or at least semantically implied), whereas adjuncts are optional. In (i), the noun phrase *de aardappelen* 'the potatoes' is virtually obligatory and can be considered an argument of the verb *schillen* 'to peel', whereas the PP *in de keuken* 'in the kitchen' is optional and can be considered an adjunct.

- (i) a. Jan schilt <sup>\*?</sup>(de aardappelen) in de keuken.
- b. Jan schilt de aardappelen (in de keuken).
- Jan peels the potatoes in the kitchen

The notion of argument is usually associated with verbs: verbs have argument structures, specifying the number and °thematic roles of their arguments. An intransitive verb like *lachen* ‘to laugh’, for example, has one (agentive) argument, a transitive verb like *lezen* ‘to read’ has two arguments, an agent and a theme, and a ditransitive verb like *geven* ‘to give’ has three arguments. The arguments of these verbal predicates fill slots in the predicate frame implied by these verbs: *lachen* is a one-place predicate LACHEN (x) and the agentive argument fills the single argument slot; *lezen* is a two-place predicate LEZEN (x,y) and the two arguments fill the two respective slots in the predicate frame; *geven* is a three-place predicate and again the three arguments fill the slots in the predicate frame GEVEN (x,y,z).

- | (ii) | • Predicate                                                   | • Example                                                                                   |
|------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| a.   | LOPEN <sub>V</sub> ( <u>Agent</u> )<br>walk                   | a'. [Jan] <sub>Agent</sub> [loopt] <sub>Pred</sub><br>Jan walks                             |
| b.   | LEZEN <sub>V</sub> ( <u>Agent</u> , Theme)<br>read            | b'. [Marie] <sub>Agent</sub> [leest een krant] <sub>Pred</sub><br>Marie reads a newspaper   |
| c.   | GEVEN <sub>V</sub> ( <u>Agent</u> , Theme, Recipient)<br>give | c'. [Jan] <sub>Agent</sub> [geeft Marie een boek] <sub>Pred</sub><br>Jan gives Marie a book |

The arguments in the predicate frame of two- and three-place predicates are not all of the same nature: filling the y and z slots in a sense completes the predicate, as a result of which it can be predicated of the argument placed in the x slot. In syntactic terms, the argument filling the x slot of a predicate normally corresponds to the subject of the clause, whereas the arguments filling the y and z slots correspond to the objects of the clause. Since the objects have the function of creating a complete predicate, they are often referred to as the °complements or INTERNAL ARGUMENTS of the verb. The subject, on the other hand, will be referred to as the EXTERNAL ARGUMENT of the verb, the argument the complete verbal predicate is predicated of. In the lexical frames in (ii), the external argument is underlined in order to distinguish it from the complements. Note that there are several complications that are not discussed here: for instance, °unaccusative verbs are assumed not to have an external argument but to be predicated of their internal argument.

Since adjectives and nouns function as predicates as well, they also take arguments. This is shown in (iii), where the adjectival/nominal noun phrase is predicated of the noun phrase *Jan*, which therefore functions as the external argument. Since the usual labels for semantic roles are created especially for expressing the roles of the arguments in the event structure denoted by verbal predications, we will simply refer to the external argument of non-verbal predicates as the REFERENT (Ref), that is, the entity with regard to which the property denoted by the adjectival/nominal noun applies.

- | (iii) | • AARDIG <sub>A</sub> ( <u>Ref</u> )                                           | • GENIE <sub>N</sub> ( <u>Ref</u> )                                                       |
|-------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| a.    | [Jan] <sub>Ref</sub> is [aardig] <sub>Pred</sub> .<br>Jan is nice              | b. [Jan] <sub>Ref</sub> is [een genie] <sub>Pred</sub> .<br>Jan is a genius               |
| a'.   | Ik vind [Jan] <sub>Ref</sub> [aardig] <sub>Pred</sub> .<br>I consider Jan nice | b'. Ik vind [Jan] <sub>Ref</sub> [een genie] <sub>Pred</sub> .<br>I consider Jan a genius |

**Binding:**

A noun phrase (typically a pronoun) is said to be bound when it is coreferential with a °c-commanding antecedent. Noun phrases differ with respect to the syntactic domain within which they must or can be bound. This is clear from the fact illustrated by the examples in (ia&b) that reflexive and referential personal pronouns like *zichzelf* and *hem* are in complementary distribution. Referential expressions like *de jongen* in (ic) normally remain free (= not bound) within their sentence.

- (i) a. Ik denk dat Jan<sub>i</sub> zichzelf<sub>i</sub>/\*hem<sub>i</sub> bewondert.  
I think that Jan himself/him admires  
'I think that Jan admires himself.'
- b. Jan<sub>i</sub> denkt dat ik hem<sub>i</sub>/\*zichzelf<sub>i</sub> bewonder.  
Jan thinks that I him/himself admire  
'Jan thinks that I admire him.'
- c. \*Jan<sub>i</sub> denkt dat ik de jongen<sub>i</sub> bewonder.  
Jan thinks that I the boy admire

Data like (i) have given rise to the formulation of the three binding conditions in (ii), in which the notion of local domain has not been defined. For the examples in (i), we may provisionally assume that it refers to the minimal clause containing the relevant noun phrase, but there are data that complicate matters; cf. Section 5.2.1.5, sub III, for a more detailed discussion.

- (ii) • **Binding conditions**
  - a. Anaphors like *zichzelf* 'himself' must be bound within their local domain.
  - b. Pronouns like *hem* 'him' must be free (= not bound) within their local domain.
  - c. Referential expressions like *Jan* or *de jongen* 'the boy' must be free.

**C-command:**

C-command refers to an asymmetric relation between the constituents in a phrase, which is generally defined in structural terms of a tree diagram:  $\alpha$  c-commands  $\beta$  if (i)  $\alpha \neq \beta$ , (ii)  $\alpha$  does not dominate  $\beta$ , and (iii) the node that immediately dominates  $\alpha$  also dominates  $\beta$ . When we restrict ourselves to clauses and ignore the verbs, this relation can also be expressed by the functional hierarchy in (i), where  $A > B$  indicates that A c-commands B and everything that is embedded in B. This means, for example, that the subject c-commands the nominal objects, the periphrastic indirect object, the PP-complement(s) and all the adjuncts of its clause, including everything that may be embedded within these constituents.

- (i) **C-command hierarchy:** subject > indirect object-NP > direct object > indirect object-PP > PP-complement > adjunct

Many restrictions on syntactic relations can be expressed by appealing to this notion: movement, for example, is only possible when the landing site c-commands the base position of the moved element, and °binding of an anaphor or a pronoun is only possible when the antecedent c-commands it.

**Clause adverb:**

See °adverb tests.

**Complement:**

The °arguments of a lexical head H, with the exception of the subject. In generative grammar, complements are generally called INTERNAL ARGUMENTs, whereas the subject is called the EXTERNAL ARGUMENT; an exception is the subject of an °unaccusative verb, which is generally assumed to be an internal argument. Internal arguments of verbs are generally obligatorily present (or at least semantically implied), whereas external arguments can occasionally be suppressed, for instance in the passive construction.

**Complementive:**

This notion refers to the predicative complement of the verb in copular, resultative or *vinden*-constructions. In (i) some examples are given with adjectival predicates. A complementive may also be a nominal or a (spatial) adpositional phrase, e.g., *Jan is leraar* ‘Jan is a teacher’ and *Jan heeft het boek in de kast gelegd* ‘Jan has put the book on the shelves’. In neutral sentences complementives are left-adjacent to the clause-final verb. This is especially clear with PP-complementives as these differ from other PPs in that they cannot undergo °PP-over-V: \**Jan heeft het boek gelegd in de kast*.

- (i) a. Jan is *erg aardig*.  
       Jan is very nice  
       b. Jan slaat de hond *dood*.  
       Jan hits the dog dead  
       c. Ik vind Jan *erg aardig*.  
       I consider Jan very nice

**Complementizer-trace Filter:**

In the generative literature from the last three decades, it has been argued that there is an asymmetry between subjects, on the one hand, and objects and adjuncts, on the other, with respect to “long” movement, that is, *wh*-extraction from clauses. Whereas objects and adjuncts can undergo long movement, subjects cannot unless the language has some special proviso that makes this movement possible, such as dropping the complementizer, as in English, or changing the form of the complementizer, like the so-called *que/qui* alternation in French. This is illustrated for English in (i).

- (i) a. Who<sub>i</sub> do you think (\*that) *t<sub>i</sub>* bought the book?  
       b. What<sub>i</sub> do you think (that) John *t<sub>i</sub>* bought?  
       c. When<sub>i</sub> do you think (that) John bought the book *t<sub>i</sub>*?

In traditional generative grammar this was accounted for by the generalization that a complementizer cannot be followed by a subject trace: \*[ ... C *t<sub>i</sub>* ...]. This generalization was originally formulated as the *that*-trace or complementizer-trace filter in Chomsky & Lasnik (1977), but was later derived as one of the empirical consequences of the EMPTY CATEGORY PRINCIPLE (ECP), formulated in Chomsky (1981).

**Conjunction Reduction:**

Within a coordinated structure, deletion of a phrase within a conjunct under identity with a phrase within the other conjunct. If the deleted phrase belongs to the first conjunct, the deletion operation is referred to as BACKWARD Conjunction Reduction; if the deleted phrase belongs to the second conjunct, the operation is referred to as FORWARD Conjunction Reduction.

- (i) a. [Jan kocht een blauwe \_\_\_] en [Peter kocht een groene auto].  
           Jan bought a blue                      and Peter bought a green car  
       b. [Jan kocht een boek] en [\_\_\_ leende een plaat].  
           Jan bought a book              and        borrowed a record

Backward Conjunction Reduction is also known as Right Node Raising because early transformational grammar derived examples like (ia) by rightward movement of the apparently deleted element simultaneously from the left and the right conjunct; cf. °Across-the-Board movement. This movement analysis is controversial given that it forces us to assume movements that are not independently motivated: in (i), for example, the movement analysis has to assume that the head noun *auto* can be extracted from the complex noun phrase *een blauwe/groene auto*, which is not attested in more uncontroversial cases of leftward movement. The existence of Forward Conjunction Reduction is also controversial; examples like (ib) can readily be derived by assuming that some lower verbal projections are coordinated: *Jan [[kocht een boek] en [leende een plaat]]*.

**Constituency test:**

Test involving movement of a string of words into the sentence-initial position, that is, the position immediately preceding the finite verb in main clauses. Any string of words that can occupy this position in Dutch is considered a constituent. Satisfying this test is sufficient for assuming constituency, but not necessary given that constituents can be embedded within larger constituents that may function as °islands for extraction. The test provides pretty reliable results when it comes to the determination of the clausal constituents (the arguments and the adjuncts of the clause). Other tests that are occasionally used are coordination and clefting.

**Coordinate Structure Constraint:**

This constraint prohibits movement of a conjunct out of a coordinated structure: for example, *wh*-movement of the second conjunct in (ia) is impossible, as shown in (ia'). The constraint also prohibits subextraction from one of the conjuncts: for example subextraction from the second conjunct in (ib) is excluded, as shown in (ib'). An exception to the ban on subextraction is when the movement applies in a so-called °Across-the-Board fashion, that is, simultaneously affects all conjuncts.

- (i) a. Jan heeft [[een artikel] en [een boek ]] gelezen.  
           Jan has    an article    and    a book        read  
       a'. \*Wat<sub>i</sub> heeft Jan [[een artikel] en [t<sub>i</sub> ]] gelezen?  
           what has    Jan    an article    and        read

- b. Jan heeft [[een boek van Peter gestolen] en [een CD aan Marie gegeven]].  
 Jan has a book from Peter stolen and a CD to Marie given
- b'. \*Wat<sub>i</sub> heeft Jan [[een boek van Peter gestolen] en [<sub>t<sub>i</sub></sub> aan Marie gegeven]]?  
 what has Jan a book from Peter stolen and to Marie given

**D-linking/D-linked:**

The notion of D-linking is a pragmatic notion that stands for Discourse-linking and refers to the ability of certain *wh*-phrases to refer to referents pre-established in the domain of discourse (domain D). A *wh*-phrase like *welke auto* 'which car' is always D-linked: a question containing this *wh*-phrase requires an answer that refers to some entity that is part of domain D. A *wh*-phrase like *wat* 'what' can but need not be D-linked: a question containing this *wh*-phrase may but need not require an answer that refers to some entity that is part of domain D. A *wh*-phrase like *wat voor een auto* 'what kind of car' is never D-linked: a question containing this *wh*-phrase cannot be answered by referring to an entity that is part of domain D. The distinction between D-linked and non-D-linked *wh*-phrases is relevant for the description of several syntactic phenomena; cf. Pesetsky (1987). In this work we will also use this notion for non-interrogative phrases.

**DO-subject:**

The subject of a passive or an °unaccusative verb. This notion is used to express that the subjects of unaccusative and passive verbs have various properties in common with the direct objects of transitive verbs. Other notions that can be found in the literature referring to the same notion are DERIVED SUBJECT and LOGICAL OBJECT.

**Expletive:**

The element *er* in existential or presentational constructions like (ia&b). Example (ic) shows that, unlike the English expletive *there*, expletive *er* can also occur in transitive clauses, provided that the direct object is nonspecific indefinite. The fact that (ic) is marked with a definite object may be part of a more general phenomenon: expletive *er* is often disfavored (though acceptable) in the presence of some presuppositional element. This is illustrated in (ic') by means of the locational pro-form *daar* 'there'. See Section 8.1.4 for more discussion.

- (i) a. dat er een probleem met de verwarming is.  
 that there a problem with the heating is  
 'that there is a problem with the heating.'
- b. dat er een man op straat loopt.  
 that there a man in the street walks  
 'that there is someone walking in the street.'
- c. dat er iemand een/?het lied zingt.  
 that there someone a/the song sings
- c'. dat (?er) daar iemand een lied zingt.  
 that there there someone a song sings

**Extrapolation:**

A movement operation that is assumed to place a clause to the right of the verbs in clause-final position. Under the traditional OV-analysis of Dutch, complement clauses are base-generated to the left of the main verb, as in (ib), and obligatorily moved to the right of the verb. Extrapolation of PPs is called °PP-over-V. Extrapolation of noun phrases and APs is not possible in Dutch.

- (i) a. dat Jan [dat hij ziek is] denkt  $\Rightarrow$
- b. dat Jan  $t_i$  denkt [dat hij ziek is]<sub>i</sub>

Since the publication of Kayne (1994), there is a still-ongoing debate concerning whether (ib) is derived from (ia) by means of Extrapolation or whether the complement is base-generated to the right of V; cf. Baltin (2006) and Broekhuis (2008: ch.2) for a review of a number of the currently available proposals. In this work, we will use the notion of Extrapolation as a purely descriptive term in order to refer to the placement of the clause to the right of the verb.

**Floating quantifier:**

Floating quantifiers are quantifiers that are associated with noun phrases occurring elsewhere in the sentence, but with which they do not form a syntactic constituent. An example is *allen* in (i) which is associated with the subject of the clause *die jongens*.

- (i) a. Die jongens zijn allen vertrokken.
- those boys are all left
- ‘Those boys have all left.’

The notion of a floating quantifier reveals a particular transformational outlook on the phenomenon: it is often assumed that the quantifier and the noun phrase it quantifies underlyingly form a constituent which is split up in the course of the syntactic derivation via either movement of the quantifier or movement of the remnant noun phrase; cf. Kayne (1975) and Sportiche (1988). There are, however, also analyses according to which floating quantifiers are independently generated adjuncts; cf. Doetjes (1997). We refer the reader to Bobaljik (2003) for a discussion of the various approaches. In this work floating quantifier is used as a pre-theoretical notion.

**Focus:**

The notion of focus is used in several different ways that should be kept strictly apart; see De Swart and De Hoop (2000) for a more extensive discussion of this notion.

I. When we are concerned with the information structure of the clause, the notion focus refers to the “new” information of the clause. As such it is opposed to the notion of presupposition, which refers to the “old” information in the clause.

II. The notion of focus is also used for certain elements in the clause that are phonetically emphasized by means of accent. Often, a distinction is made between emphatic, contrastive and restrictive focus. EMPHATIC focus simply highlights one of the constituents in the clause, as in (ia). CONTRASTIVE focus is normally used



when one or more specific referents are part of the domain of discourse to which the proposition does not apply, and can also be used to deny a certain presupposition on the part of the hearer, as in (ib). RESTRICTIVE focus implies that the proposition in question is not true of any other referents: a specific, restricted set is selected and a proposition is said to hold for this set only. It is often used for restrictive adverbial phrases like *van Jan* in (ic): assigning focus to this phrase suggests that the other relevant persons in the discourse did not yet hand in the assignment.

- (i) a. Ik heb hem een BOEK gegeven.  
I have him a book given  
'I have given him a BOOK.'
- b. Nee, ik heb hem een BOEK gegeven (en geen PLAAT).  
no, I have him a book given and not.a record  
'No, I gave him a BOOK (not a RECORD).'
- c. Van JAN heb ik de opdracht al ontvangen.  
from Jan have I the assignment already received  
'From JAN, I have already received the assignment.'

### Freezing:

The phenomenon that extraction from certain moved constituents is not possible. For example, if a prepositional complement occupies its "unmarked" position immediately to the left of the clause-final verb(s), °R-extraction is possible, as shown by (ia'). However, if it occupies a position more to the left, R-extraction is excluded, as is shown by (ib'). In the primed examples the stranded preposition and its moved complement are given in italics.

- (i) a. dat Jan al tijden op dat boek wacht.  
that Jan already ages for that book waits  
'that Jan has already been waiting for that book for ages.'
- a'. het boek *waar* Jan al tijden *op* wacht  
the book where Jan already ages for waits  
'the book that Jan has already been waiting for for ages'
- b. dat Jan op dat boek al tijden wacht.
- b'. \*het boek *waar* Jan *op* al tijden wacht

### Head-final Filter on attributive adjectives:

The Filter in (i) requires that the adjective carrying the attributive *-e/-Ø* ending be adjacent to the noun it modifies. The filter is formulated such that it allows recursive patterns such as [<sub>NP</sub> een [<sub>moioe</sub> [<sub>grote</sub> [<sub>Amerikaanse</sub> [<sub>N auto</sub>]]]]] 'a beautiful big American car'.

- (i) • Head-final Filter on attributive adjectives: \*[<sub>NP</sub>... [<sub>AP</sub> ADJ XP] N<sup>#</sup>], where XP is phonetically non-null and N<sup>#</sup> is a bare head noun or a noun preceded by an adjective phrase: [(AP) N].

### Implied subject:

See °PRO.

**Individual-level predicate:**

See °Stage-level predicate.

**Intensifier:**

An adverbial modifier of a scalar adjective that specifies the degree to which the property denoted by the adjective holds. There are three types of intensifiers: AMPLIFIERS, which scale upwards from a tacitly assumed norm, DOWNTONERS, which scale downwards from the assumed norm, and NEUTRAL INTENSIFIERS, which are neutral in this respect.

**Island for extraction:**

An island for extraction is a constituent out of which extraction cannot take place. A distinction can be made between *strong* and *weak* islands. Strong islands are constituents out of which extraction is blocked categorically, whereas weak islands are constituents out of which only certain elements (especially adjunct phrases) cannot be extracted.

**Lexical Integrity Constraint:**

Constraint according to which no syntactic process may affect a subpart of a word. For example, *wh*-movement may not apply to the first part of the compound *CD-speler* in (ia).

- (i) a. Jan kocht [een [<sub>N</sub> CD-speler]]  
       Jan bought a CD player  
       b. Wat<sub>i</sub> kocht Jan [een [<sub>N</sub> t<sub>i</sub> speler]]?  
       what bought Jan a player

**Logical SUBJECT (vs. grammatical subject):**

The constituent of which some other constituent in the clause is predicated. This notion of logical SUBJECT coincides with the notion of external °argument in generative grammar and is thus based on the °thematic relations within the clause. It differs from the traditional notion of (grammatical) subject that is used to refer to the nominative argument in the clause. In (ia), for example, the adjective *leeg* ‘empty’ is predicated of the noun phrase *de fles* ‘the bottle’, which therefore functions as the logical SUBJECT of *leeg*. Although this is not controversial, we will assume in this work that the predicate and its SUBJECT form a SMALL CLAUSE, that is, a complex constituent headed by the predicative element; cf. Stowell (1981/1983). More examples are given in (ib&c), where the noun phrases *Peter* and *de boeken* function as the SUBJECT of, respectively, a nominal and a prepositional predicate.

- (i) a. Jan gooide [<sub>SC</sub> de fles leeg].  
       Jan threw the bottle empty  
       b. Jan noemde [<sub>SC</sub> Peter een leugenaar].  
       Jan called Peter a liar  
       c. Jan zette [<sub>SC</sub> de boeken in de kast].  
       Jan put the books on the shelves

**Middle field:**

The middle field of the clause is defined as that part of the clause bounded to the right by the verbs in clause-final position (if present), and to the left by the complementizer in an embedded clause or the finite verb in second position of a main clause. The middle field of the examples in (i) is given in italics.

- (i) a. Gisteren heeft *Jan met plezier dat boek* gelezen.  
           yesterday has Jan with pleasure that book read  
       b. Ik denk [*dat Jan met plezier dat boek* gelezen heeft].  
           I think that Jan with pleasure that book read has

It is important to realize that the middle field of a clause is not a constituent, but simply refers to a set of positions within the clause. This set of positions includes the base positions of the nominal arguments of the verb within VP (but not the verb itself), as well as a variety of positions external to VP such as the positions of the adverbial phrases and positions that can act as a landing site for, e.g., °scrambling.

**Modifier:**

In the nominal domain, modifiers are normally used to restrict the denotation of the modified noun. Modification of nouns is typically obtained by means of adjectival and prepositional phrases, as well as relative clauses. Some typical examples, in which the modifiers are italicized, are given in (i).

- (i) a. een *mooi* boek  
           a beautiful book  
       b. het huis *op de hoek*  
           the house on the corner  
       c. de man [*die hier gisteren was*]  
           the man who here yesterday was  
           ‘the man who was here yesterday’

**Negative polarity:**

Negative polarity items are constituents that cannot occur in all environments, but require some other element, like negation, in their environment to license them. Typical examples are the *ook maar*-phrases in (i): this phrase is licensed in (ia) by the negative noun phrase *niemand*, but blocked in (ib) due to the absence of such a negative constituent. Example (ic) shows that negative polarity items can also occur in, e.g., hypothetical contexts.

- (i) a. Niemand heeft ook maar iets gezegd.  
           nobody has OOK MAAR something said  
           ‘Nobody has said anything at all.’  
       b. \*Jan heeft ook maar iets gezegd.  
           Jan has OOK MAAR something said  
       c. Als er ook maar iets tegenzit, raakt hij in paniek.  
           if there OOK MAAR something go.against become he in panic  
           ‘If anything at all goes wrong, he panics.’

**Operator:**

A term borrowed from predicate calculus, where it refers to those elements that combine with a formula  $\phi$ , thereby creating a new formula  $OP\phi$ . Examples of such operators are the existential operator  $\exists x$ , the universal operator  $\forall x$ , and the negative operator  $\neg$ . In generative syntax, this notion is extended to expressions from natural languages such as *iemand* ‘someone’, *iedereen* ‘everyone’, *niet* ‘not’, and *wh*-phrases such as *wie* ‘who’ and *wat* ‘what’.

**Parasitic gap:**

An empty element in the sentence that is assumed to be licensed by the antecedent of another empty element in the sentence. In (ia), the empty object position in the infinitival clause headed by the verb *lezen* ‘to read’ is assumed to be licensed by the antecedent of the trace that occupies the object position of the verb *opbergen* ‘to file’. The empty position within the adjunct clause *zonder te lezen* cannot be the trace of the moved *wh*-phrase *wat* ‘what’ since adjuncts are °islands for extraction. The structure of (ia) is therefore as indicated in (ib), in which *t* stands for the trace of *wat*, and PG is the parasitic gap.

- (i) a. Wat heb je zonder te lezen opgeborgen?  
       what have you without to read prt.-filed  
       ‘What did you file without reading?’  
   b. Wat heb je [zonder PG te lezen] *t* opgeborgen.

Often, it is assumed that *PG* is actually a trace of a phonetically empty operator *OP* that is moved into the initial position of the adjunct clause. In Dutch, parasitic gaps are licensed not only by *wh*-movement, but also by scrambling. This is shown in (iia), which is assumed to have the structure in (iib), where *t* is the trace of the moved direct object *dat boek*, and *PG* stands for the parasitic gap licensed by scrambling.

- (ii) a. Jan heeft dat boek zonder te lezen opgeborgen.  
        Jan has that book without to read prt.-filed  
   b. Jan heeft dat boek [zonder *PG* te lezen] *t* opgeborgen.

**Passive:**

Dutch has two forms of Passive. The first form is the so-called regular passive illustrated in (ib) and (iib), which requires the presence of the auxiliary *worden* ‘to be’ or *zijn* ‘to have been’ and promotes the direct object to subject. The second form is the so-called semi- or *krijgen*-passive, illustrated in (iic), which requires the presence of the auxiliary *krijgen* ‘to get’ and promotes the indirect object to subject.

- (i) a. Jan verkocht de boeken.  
       Jan sold the books  
   b. Het boek werd verkocht.  
       the books were sold

- (ii) a. Jan bood Marie de boeken aan.  
 Jan offered Marie the books prt.  
 b. De boeken werden Marie aangeboden.  
 the books were Marie prt.-offered  
 c. Marie kreeg de boeken aangeboden.  
 Marie got the books prt.-offered

The *krijgen*-passive is normally considered idiomatic but it can be argued that it is in fact a productive process. The main reason for adopting the first position is that a prototypical double object verb like *geven* 'to give' does not allow it; cf. (iiib). This may be due, however, to the fact that *geven* is semantically light in the sense that it does not have a manner component and merely indicates that some object is transferred; it is conceivable that this lightness make it possible to elide the participle in (iiib'), which would result in the fully acceptable sentence in (iiic).

- (iii) a. Jan gaf Marie de boeken aan.  
 Jan gave Marie the books prt.  
 b. \*Marie kreeg de boeken gegeven.  
 Marie got the books given  
 c. Marie kreeg de boeken.  
 Marie got the books

### **Pied Piping:**

In interrogative clauses the sentence-initial position must be occupied by a *wh*-word; cf. (ia). Occasionally, however, *wh*-movement may or must involve a larger constituent that contains the *wh*-word. In (ib), for example, the preposition must be moved along with the *wh*-element *wie* 'who'. This phenomenon is called pied piping; the *wh*-element *wie* pied pipes the proposition *op*. Pied piping also occurs in the case of other movement types.

- (i) a. Wie heb je gezien?      b. Op wie heb je gewacht?  
 who have you seen      for whom have you waited  
 'Who did you see?'      'For whom did you wait?'

### **PP-over-V:**

Many adpositional phrases can occur both in a position preceding and in a position following the verb(s) in clause-final position. Some examples are given in (i). In traditional generative grammar, it is assumed that the order in (ia) is the base order and that the other orders are derived by °extraposition of the PPs: (ib) is derived by PP-over-V of the adverbial adjunct of place *op het station* 'at the station', example (ic) by PP-over-V of the PP-complement of the main verb, *op zijn vader* 'for his father', and example (id) by PP-over-V of both PPs. Observe that the PPs occur in inverted order in (ia) and (id), that is, PP-over-V of more than one PP results in a mirroring of the original order; cf. Koster (1974).

- (i) a. Jan heeft op het station op zijn vader gewacht.  
 Jan has at the station for his father waited  
 'Jan has waited for his father at the station.'  
 b. Jan heeft op zijn vader gewacht op het station.  
 c. Jan heeft op het station gewacht op zijn vader.  
 d. Jan heeft gewacht op zijn vader op het station.

PP-over-V seems to be related to the information structure of the clause. In Dutch the presence of °expletive *er* signals that the clause does not contain a constituent expressing a presupposition. Given the fact that the expletive is optional in (iia), we must conclude that the PP *in het stadion* can be interpreted either as part of the focus of the clause or as a presupposition. However, the obligatory presence of the expletive in (iib) indicates that the postverbal PP must be part of the focus of the clause; see also Koster (1978), Guéron (1980), Scherpenisse (1985), and Bennis (1986).

- (ii) a. dat (er) in het stadion gevoetbald wordt.  
 that there in the stadium played.soccer is  
 'People are playing soccer in the stadium.'  
 b. dat \*(er) gevoetbald wordt in het stadion.

The traditional assumption that PP-over-V involves extraposition of the PP (Koster 1973/1974) has recently been challenged, and many alternative proposals are available at this moment; see, e.g., Kayne (1994), Koster (2000), Barbiers (1995), Kaan (1997), Bianchi (1999), De Vries (2002), and Broekhuis (2008) for relevant discussion. Since it is descriptively simpler, we adopt the traditional view in the main text, but it must be kept in mind that this is not the generally accepted view at the present moment.

### **Preposition stranding:**

See °R-extraction.

### **Presupposition:**

See °focus.

### **PRO:**

A phonetically unrealized pronominal noun phrase that may act as the subject of, e.g., an infinitival clause. PRO may be controlled by (= construed as coreferential with) some noun phrase in the matrix clause, as in (ia), or be interpreted as having arbitrary reference, as in (ib).

- (i) a. John<sub>i</sub> tries [PRO<sub>i</sub> to fix the sink].  
 b. It is nice [PRO to visit Mary].

### **Projection:**

Each lexical head L is assumed to form a projection (= a larger structure) LP by combining with its arguments and (optional) modifiers. Generally, it is assumed that a projection is hierarchically structured: first, L combines with its complement(s) and after that it combines with its subject and modifiers. Evidence for this comes, e.g., from °binding: a subject can bind an object but not vice versa.

In current generative grammar it is commonly assumed that functional heads (like complementizers, numerals or determiners) project a so-called functional projection FP by combining with some lexical projection LP or some other functional projection. For example, the noun phrase *de drie kleine kinderen* ‘the three little children’ is assumed to have the structure in (i): first, the lexical N *kinderen* ‘children’ combines with its attributive modifier *kleine* to form the lexical projection NP; after that, the numeral *drie* ‘three’ forms the functional projection NumP by combining with the NP; finally, the determiner *de* ‘the’ combines with the NumP, and forms the functional projection DP.

- (i)            [DP de [NumP drie [NP kleine kinderen]]]  
                  the        three    little    children

### Quantitative *er*;

Indefinite (but not definite) noun phrases containing a cardinal numeral or a weak quantifier may co-occur with so-called quantitative *er*. A noun phrase associated with quantitative *er* is characterized as containing an interpretative gap [*e*]. The descriptive content of this gap must be recoverable from the discourse or the extra-linguistic context. The nature of the gap is currently subject to debate. Quantitative *er* and its associate noun phrase are discussed in more detail in Section 6.3.

- (i)    a.    Jan heeft twee boeken en    Piet heeft er [drie [*e*]].  
               Jan has    two books    and Piet has    ER three  
       b.    Jan heeft weinig boeken maar    Marie heeft er [veel [*e*]].  
               Jan has    few books        but    Marie has    ER many

### Raising verb:

Verbs like *schijnen/lijken* ‘to seem’ and *blijken* ‘to appear’ that allow the subject of an infinitival object clause to surface as the subject of the main clause. This can be illustrated by means of the examples in (i): the noun phrase that functions as the subject of the finite clause in (ia) surfaces as the subject of the main clause in (ib).

- (i)    a.    Het schijnt [dat Jan ziek is].  
               it    seems that Jan ill    is  
               ‘It appears that Jan is ill.’  
       b.    Jan schijnt [*t<sub>i</sub>* ziek te zijn].  
               Jan seems    ill    to be  
               ‘Jan seems to be ill.’

It is generally assumed that Raising verbs are °unaccusative verbs. This implies that the anticipatory pronoun in (ia) is an internal °argument of the verb, and that in (ib) the noun phrase *Jan* is moved into the subject position of the clause by means of movement, which accounts for the °trace in the subject position of the infinitival clause. The movement of the subject is often referred to as Subject Raising.

### R-extraction:

In Dutch, °Preposition Stranding is not possible through movement of an NP-complement of the adposition, but only through extraction of an °R-pronoun (*er/waar*) from pronominal PPs like *er onder* ‘under it’ or *waar onder* ‘under what’.

Stranding of the preposition may be the result of, e.g., scrambling of the R-pronoun, as in (ia), or *wh*-movement or relativization, as in (ib&b'). Generally, we use italics to indicate the parts of the discontinuous PP. A comprehensive discussion of R-extraction is given in Chapter P5.

- (i) a. Jan heeft *er* gisteren *naar* gevraagd.  
 Jan has there yesterday for asked  
 'Jan asked for it yesterday.'
- b. *Waar* heeft Jan *naar* gevraagd?  
 where has Jan for asked  
 'What did Jan ask for?'
- b'. het boek *waar* Jan *naar* gevraagd heeft  
 the book where Jan for asked has  
 'the book that Jan has asked for'

### R-pronominalization:

The process of creating a pronominal PP, that is, a PP consisting of a preposition and an °R-pronoun.

### R-pronoun:

In Dutch, prepositions cannot be followed by third person, neuter pronouns like *het* 'it' or *iets* 'something'. So, whereas (ia) is fully acceptable, (ib) is excluded: the neuter pronoun is obligatorily replaced by a so-called R-pronoun *er/daar/ergens/...*, as in (ib'). Occasionally, the replacement by an R-pronoun is optional, e.g., in the case of the quantificational pronouns *iets* 'something' or *niets* 'nothing' in (ic). See Chapter P5 for extensive discussion.

- (i) a. naar hem/haar 'to him/her'  
 b. \*naar het  
 c. naar (n)iets  
 'to something/nothing'
- b'. er naar 'to it'  
 c'. (n)ergens naar  
 'to something/nothing'

### Scope:

In semantics, the scope of an °operator is the subformula it is combined with; if  $\forall x$  combines with a formula  $\phi$ , thus forming the formula  $\forall x(\phi)$ , all elements included by  $\phi$  are in the scope of the operator  $\forall x$ . In generative grammar, it is assumed that syntactic operators such as *iemand* 'someone', *iedereen* 'everyone', *niet* 'not', *wie* 'who' and *wat* 'what' are operators that take scope. The scope of these elements may or may not be reflected by their actual position in the sentence. By extension, we will also use the notion scope to indicate which part of the structure is modified by a certain modifier.

### Scrambling:

The word order of Dutch in the °middle field of the clause is relatively free. Generally this is accounted for by assuming that Dutch has a set of "short" leftward movements that target clause-internal positions. In this way constituents may be moved across adverbial phrases, thus giving rise to word order variation. This is illustrated in (i).



- (i) a. Jan zal waarschijnlijk morgen dat boek kopen.  
 Jan will probably tomorrow that book buy  
 'Jan will probably buy that book tomorrow.'  
 b. Jan zal waarschijnlijk dat boek morgen kopen.  
 c. Jan zal dat boek waarschijnlijk morgen kopen.

Scrambling is not a unitary phenomenon but actually functions as a cover term for several types of movement. In the prototypical case, scrambling is related to the information structure of the clause. In an example like (ia), in which the noun phrase *het boek* is not scrambled, the noun phrase typically belongs to the °focus ("new" information) of the clause. In (ic), where it is scrambled, it belongs to the PRESUPPOSITION ("old" information) of the clause; in this example it is rather the adverb *morgen* that constitutes the focus of the clause. Scrambling can, however, also apply for other reasons. In (iia'), for example, the scrambled AP *zo aardig* is assigned emphatic focus, and in (iib'), scrambling of the PP *voor niemand* is forced due to the presence of negation on the nominal complement of the preposition.

- (ii) a. dat Jan nog nooit zo aardig geweest is.  
 that Jan yet never that nice been has  
 'that Jan has never been that nice before.'  
 a'. dat Jan ZO aardig nog nooit geweest is.  
 b. \*?dat Jan aardig voor niemand is.  
 that Jan nice for nobody is  
 'that Jan isn't nice for anybody.'  
 b'. dat Jan voor niemand aardig is.

There are many controversies concerning the nature of scrambling, including the question of whether movement is involved, and, if so, whether this movement has properties normally associated with A-movement (like the movement that places the subject into the regular subject position), or with A'-movement (like *wh*-movement or topicalization), or with both; cf. °Webelhuth's paradox. There is a vast literature on scrambling; here we mention only some important more recent contributions: Verhagen (1986), Vanden Wyngaerd (1988/1989), Grewendorf & Sternefeld (1990), De Hoop (1992), Corver & Van Riemsdijk (1994), Neeleman (1994b), and Broekhuis (2000/2008).

### **Second order predicate:**

Second order predicates are predicates that denote properties, not entities, and are characterized by the fact that their °logical SUBJECT is itself a predicate, which therefore need not be a noun phrase; typical examples are given in (i). In the generative literature, the use of predicates as SUBJECTs in constructions of the type in (i) is sometimes referred to in terms of the notion "honorary NP"; cf. Safir (1983).

- (i) a. Onder het bed is een goede schuilplaats.  
 under the bed is a good hiding place  
 b. Rood is een mooie kleur.  
 red is a nice color

**Small clause:**

See °logical SUBJECT.

**Stacking:**

The term stacking refers to constructions containing two or more modifiers of the same kind, in which one modifier has °scope over the other. Some examples of constructions with stacked restrictive relative clauses are given in (i).

- (i)     • Stacked restrictive relative clauses
- a.   De [[student<sub>i</sub> [die<sub>i</sub> hier net was]]<sub>j</sub> [die<sub>j</sub> Engels studeert]] is mijn vriend.  
       the student who here just was who English studies is my friend  
       ‘The student who was just here who studies English is my friend.’
- b.   De [[man<sub>i</sub> [die<sub>i</sub> hier net was]]<sub>j</sub> [die<sub>j</sub> Russisch sprak]] is een bekend schrijver.  
       the man who here just was who Russian spoke is a well-known writer  
       ‘The man that was just here who spoke Russian is a well-known writer.’

As indicated by the bracketing and indexing, the first relative clause in (ia) modifies the antecedent *student* ‘student’, while the second relative clause modifies the sequence *student die hier net was* ‘student who was just here’. The structure of these sentences differs from those in examples (iia&b), which illustrate cases of nesting and coordination, respectively. In (iia), the second relative clause modifies an element contained in the first R-clause; in (iib), the two relative clauses modify the same antecedent.

- (ii) a. De man<sub>i</sub> [die<sub>i</sub> gisteren een boek<sub>j</sub> kocht [dat<sub>j</sub> over WO II gaat]] is mijn vriend.  
       the man who yesterday a book bought which about WW II goes is my friend  
       ‘The man who bought a book yesterday which is about the war is my friend.’
- b.   De man<sub>i</sub> [die<sub>i</sub> hier net was] en [die<sub>i</sub> Russisch sprak] is een bekend schrijver.  
       the man who here just was and who Russian spoke is a well-known writer  
       ‘The man who was just here and who spoke Russian is a well-known writer.’

**Stage-level:**

A stage-level predicate expresses a transitory property of the entity it modifies. The stage-level predicates stand in opposition to the individual-level predicates, which denote a more permanent property. This distinction seems to be syntactically relevant in several respects. Stage-level adjectives, for instance, can be used in (i) expletive copula, (ii) resultatives and (iii) absolute *met*-constructions, (iv) allow the copula *worden* ‘to become’, and (v) can be combined with a time adverb such as *vandaag*, whereas these patterns lead to a weird result in the case of the individual-level adjectives.

- (i) a. Er is iemand ziek/?intelligent.  
       there is someone ill/intelligent
- b. De spaghetti maakte Jan ziek/?intelligent.  
       the spaghetti made Jan ill/intelligent

- c. [Met Jan ziek/<sup>??</sup>intelligent] kan de vergadering niet doorgaan.  
with Jan ill/intelligent can the meeting not take.place
- d. Jan wordt ziek/<sup>??</sup>intelligent.  
Jan becomes ill/intelligent
- e. Jan is vandaag ziek/\*intelligent.  
Jan is today ill/intelligent

**Strong:**

See °weak.

**Superiority condition:**

The superiority condition (Chomsky 1973) states that when a transformation can in principle be applied to two constituents in the structure, it has to be applied to the one that is superior. Some constituent A is superior to constituent B if A °c-commands B, but B does not c-command A. For the constituents mentioned in our c-command hierarchy in (i), c-command and superiority are interchangeable notions. When we define these notions in structural terms, however, they may differ in various respects. More recent (relativized) versions of the superiority condition are the Relativized Minimality Condition proposed in Rizzi (1990) and the Locality Conditions proposed in Chomsky (1995) and later work.

- (i) **C-command hierarchy:** subject > indirect object-NP > direct object > indirect object-PP > PP-complement > adjunct

**Supplementive:**

The supplementive is a constituent of the clause that denotes a property of the subject or the direct object. This is illustrated in (ia&b) by means of supplementive adjectives. In (ia), the adjective *dronken* ‘drunk’ denotes a property of the subject *Jan*, and in (ib) the adjective *leeg* ‘empty’ denotes a property of the direct object *de fles* ‘the bottle’.

- (i) a. *Jan ging dronken naar huis.*  
Jan went drunk to home  
‘Jan went home drunk.’
- b. *Marie zet de fles leeg in de kast.*  
Marie puts the bottle empty into the cupboard  
‘Marie is putting the bottle into the cupboard empty.’

The relation between the supplementive and the clause is one of “simultaneousness” or “material implication”. The property expressed by the supplementives in (i) holds at the same time as the action expressed by the clause. Example (ib), for instance, can be paraphrased as “Marie puts the bottle in the cupboard *while* it (=the bottle) is empty”. In (ii), we give an example in which the relation is a material implication: “that you will iron your shirt smoother *when* it is wet”. The supplementive is extensively discussed in Section A6.3.

- (ii) dat je je overhemd nat gladder strijkt.  
that you your shirt wet smoother iron  
‘that you will iron your shirt smoother wet.’

**Thematic role/relation:**

A thematic role is a formal means to express the semantic relation between a head and its arguments. It is often assumed that there are different thematic roles that can be assigned to arguments, e.g., AGENT, THEME (or PATIENT), GOAL and SOURCE.

**Topicalization:**

Topicalization is a movement operation that places some constituent in the clause-initial position of a main clause, that is, into the position in front of the finite verb. In (i), the italicized phrases are topicalized, although it has been suggested that the subject in (ia) has not been topicalized but occupies the regular subject position; see Section 8.1.2.2 for relevant discussion.

- (i) a. *Marie* heeft dat boek gisteren op de markt gekocht.  
       Marie has that book yesterday at the market bought  
       ‘Marie bought that book at the market yesterday.’
- b. *Dat boek* heeft Marie gisteren op de markt gekocht.
- c. *Gisteren* heeft Marie dat boek op de markt gekocht.
- d. *Op de markt* heeft Marie gisteren dat boek gekocht.

Pragmatically seen, a topicalized phrase can have several functions. It may be the topic of discourse: in (ia), for example, the discussion is about Marie, in (ib) about the book, etc. The topicalized phrase may also be used contrastively, for instance to contradict some (implicitly or explicitly made) supposition in the discourse, as in (ii). In these cases, the topicalized phrase receives contrastive accent.

- (ii) a. *MARIE* heeft het boek gekocht (niet JAN).  
        Marie has the book bought not Jan
- b. *BOEKEN* heeft ze gekocht (geen PLATEN).  
        books has she bought not records

**Trace (t):**

A formal means of marking the place a constituent once held before it was moved to another position. The trace and the moved constituent are generally coindexed.

**Unaccusative verb:**

Unaccusative verbs never take an accusative object. The subject of these verbs stands in a similar semantic relation with the unaccusative verb as the direct objects with a transitive verb. This is quite clear in the pair in (i); the nominative noun phrase *het glas* ‘the glass’ in the unaccusative construction (ib) stands in the same relation to the verb as the accusative noun phrase *het glas* in the transitive construction in (ia).

- (i) a. Jan breekt het glas.  
       Jan breaks the glass
- b. Het glas breekt.  
       the glass breaks

It is assumed that the subject in (ib) originates in regular direct object position but is not assigned accusative case by the verb, so it must be moved into subject position, where it can be assigned nominative case. For this reason, we call the subject of an

unaccusative verb a °DO-subject. The fact that (ib) has a transitive alternate is an incidental property of the verb *breken* 'to break'. Some verbs, such as *arriveren* 'to arrive', only occur in an unaccusative frame.

It is often assumed that regular intransitive verbs and unaccusative verbs have three distinguishing properties: (a) intransitives take the perfect auxiliary *hebben* 'to have', whereas unaccusatives take the auxiliary *zijn* 'to be'; (b) the past/passive participle of unaccusatives can be used attributively to modify a head noun that corresponds to the subject of the verbal construction, whereas this is not possible with intransitive verbs; (c) the impersonal passive is possible with intransitive verbs only. These properties are illustrated in (ii) by means of the intransitive verb *lachen* 'to laugh' and the unaccusative *arriveren* 'to arrive', cf. Hoekstra (1984a).

- |      |                                                                  |                                                                  |
|------|------------------------------------------------------------------|------------------------------------------------------------------|
| (ii) | <ul style="list-style-type: none"> <li>• Intransitive</li> </ul> | <ul style="list-style-type: none"> <li>• Unaccusative</li> </ul> |
| a.   | Jan heeft/*is gelachen.<br>Jan has/is laughed                    | a'. Jan is/*heeft gearriveerd.<br>Jan is/has arrived             |
| b.   | *de gelachen jongen<br>the laughed boy                           | b'. de gearriveerde jongen<br>the arrived boy                    |
| c.   | Er werd gelachen.<br>there was laughed                           | c'. *Er werd gearriveerd.<br>there was arrived                   |

There are, however, cases that show only part of the prototypical behavior of unaccusative verbs. Locational verbs like *hangen*, for example, enter an alternation similar to the verb *breken* in (i), but nevertheless the verb *hangen* in (iiib) does not exhibit the behavior of the verb *arriveren* in (ii). It has been suggested that this might be due to the fact that there is an aspectual difference between the verbs *arriveren* and *hangen*: the former is telic whereas the latter is not.

- (iii) a. Jan hangt de jas in kast.  
Jan hangs the coat into the wardrobe
- b. De jas hangt in de kast.  
the coat hangs in the wardrobe

### Verb-Second:

The phenomenon in Dutch that the finite verb normally occupies the so-called second position of the main clause, that is, is preceded by precisely one constituent (see also °constituency test). In embedded clauses the finite verb is placed in clause-final position, just like the non-finite verbs, which is generally considered as its "base"-position; Verb-Second is often used for the movement placing the finite verb in second position.

### VP adverb:

See °adverb tests.

### Weak:

The notions of WEAK and STRONG have two different uses, depending on whether we are dealing with pronouns, or with noun phrases, determiners and quantifiers.

I. The notions of WEAK and STRONG PRONOUN refer to the phonetic shape of the pronouns: the former refers to the phonetically reduced form and the latter to the phonetically non-reduced form.

II. An easy way to distinguish WEAK and STRONG NOUN PHRASES is to consider their behavior in °expletive constructions; cf., e.g., Milsark (1974/1977) and Barwise & Cooper (1981). Whereas weak noun phrases may enter such constructions, the strong ones may not. Thus, example (ia) shows that indefinite noun phrases are weak. Example (ib) is only acceptable on a generic reading, which shows that generic noun phrases are strong.

- (i) a. Er loopt een kat op het dak.  
           there walks a cat on the roof  
           ‘There is a cat walking on the roof.’  
       b. #Een kat loopt op het dak.  
           a cat walks on the roof

Whether a certain noun phrase is weak or strong depends on the determiner or quantifier it contains, which, by extension, are therefore also referred to by means of the notions weak and strong. The examples in (ii) show that noun phrases containing a numeral or a quantifier like *veel* ‘many’ may be either weak or strong. This difference goes hand in hand with a semantic distinction: the weak noun phrases receive an existential interpretation in the sense that they introduce new entities into the domain of discourse, whereas the strong ones receive a partitive reading in the sense that they refer to a subset of a larger set of entities already present in the domain of discourse.

- (ii) a. Er lopen twee/veel katten op het dak.  
           there walk two/many cats on the roof  
           ‘There are two/many cats walking on the roof.’  
       b. Twee/veel katten lopen op het dak.  
           two/many cats walk on the roof  
           ‘Two/Many of the cats walk on the roof.’

The examples in (iii), finally, show that definite noun phrases and noun phrases containing a quantifier like *alle* are strong.

- (iii) a. \*Er lopen de/alle katten op het dak.  
           there walk the/all cats on the roof  
       b. De/alle katten lopen op het dak.  
           the/all cats walk on the roof

### **Webelhuth’s paradox:**

Webelhuth’s paradox refers to the fact that scrambling seems to simultaneously exhibit properties of A-movement (the type of movement applied to, e.g., the subject in passive constructions) and A’-movement (like *wh*-movement or topicalization). For example, the fact that scrambling feeds binding is a typical A-movement property (cf. Van den Wyngaerd 1988/1989), whereas the fact that scrambling licenses °parasitic gaps is generally considered an A’-movement

property (cf. Bennis & Hoekstra 1984). The binding facts are illustrated in (i), and the parasitic gap facts in (ii).

- (i) a. \*Hij heeft namens *elkaar* *de jongens* bezocht.  
       he has on.benefit.of each.other the boys visited  
       b. Hij heeft *de jongens*<sub>i</sub> namens *elkaar* *t<sub>i</sub>* bezocht.  
       he has the boys on.benefit.of each.other visited  
       ‘He visited the boys on behalf of each other.’
- (ii) a. \*Hij heeft [zonder PRO *PG* te bekijken] *het boek* opgeborgen.  
       he has without to look.at the book prt.-filed  
       b. Hij heeft *het boek*<sub>i</sub> [zonder PRO *PG* te bekijken] *t<sub>i</sub>* opgeborgen.  
       he has the book without to look.at prt.-filed  
       ‘He filed the book without looking (at it).’

A plausible solution to Webelhuth’s paradox is to assume that the notion of scrambling is not a unitary phenomenon, but actually refers to (at least) two different types of movement (cf. Vanden Wyngaerd 1988/1989; Déprez 1989; Mahajan 1990; Neeleman 1994b). The fact that the object in (iii) is able to both bind the anaphor and to license the parasitic gap can then be accounted for as follows: the object is not moved into its surface position in one fell swoop, but in two steps. The first step involves A-movement and enables binding of the anaphor *elkaar* ‘each other’. The second step involves A’-movement and licenses the parasitic gap.

- (iii) Hij had *de gasten*<sub>i</sub> [zonder *pg* te bekijken] *t’<sub>i</sub>* aan *elkaar* *t<sub>i</sub>* voorgesteld.  
       he had the guests without to look.at to each.other introduced  
       ‘He had introduced the guests to each other without looking (at them).’

### **Wh-movement:**

Movement of a *wh*-phrase such as *wie* ‘who’ or *wat* ‘what’ into clause-initial position.

- (i) a. Wie<sub>i</sub> heeft Jan gisteren *t<sub>i</sub>* ontmoet?  
       who has Jan yesterday met  
       ‘Who did Jan meet yesterday?’  
       b. Wat<sub>i</sub> heb je vandaag *t<sub>i</sub>* gedaan?  
       what have you today done  
       ‘What did you do today?’

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